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J. H. GARO
BERTHA CUSHING CHILD

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The Case Against the Moving-Picture

C. H. CLAUDY

WHEN PHOTO-ERA took up the subject of moving-pictures, and asked me to write a story on the degradation of the shows — some of them — daily, almost hourly, given in the Nickelodeons all over the country, and later had Mr. Haines write his most interesting article on the technical side of the question, it doubtless expected that some one would sit up and take notice. But it seems to have done more than that. Judging by the vigorous protests from one quarter, and from other quarters equally vigorous commendation, the subject is popular, and the articles in question touched some one's sore elbow!

The Moving-Picture News, official organ for the moving-picture industry, had something to say about the matter which is more illuminating for what it does n't say than for what it does. I quote it in full:

"The PHOTO-ERA, of Boston, in its last two issues has been trying to give the moving-picture industry a black eye. Whether it has succeeded or not is an open question, but there is no doubt it has tried to make out a very good case against the indecent film. It is not the present-day film so much that would cause C. H. Claudy and Robern Thorn Haines to write so strongly. They must have seen some of the old issues which were very much open to question. We believe that, to a very large extent, the manufacturers are sincerely trying to eliminate anything that has a tendency to offend the people of Nickelodia, and we feel sure that in the near future such scathing attacks will not be in order, but that the industry will be lifted to a higher plane which will be of benefit both intellectually and educationally to the public.

"C. H. Claudy is one of the best-known writers on matters photographic, and Robert Thorn Haines is one of the greatest living authorities on moving-pictures, being an inventor of moving-picture machines and stereoscopic cinematography, and anything emanating from their pens will have a world-wide quotation."

In the first place, nothing could have been further from the intentions of PHOTO-ERA, of Mr. French, its editor and publisher, or of myself — and I am

sure, also, of Mr. Haines — than the giving of a "black eye" to the moving-picture industry when that industry is what it should be. If you are in a railroad wreck and sue the company and rush into print with a vigorous denunciation of the management and the alleged carelessness of the switchman, etc., you are neither indulging in a tirade against railroads nor trying, by law, to give them a "black eye"— you are doing your eye-blacking on one particular railroad, and have no quarrel with the rest of them.

No one, PHOTO-ERA and its contributors least of all, wants to hurt the legitimate moving-picture industry in the least. It is when it is conducted in such a manner that it panders to low taste, makes for crime and vice, and is a loafing-place for young people of such tender years that anything impressive is taken as true, no matter how false it may actually be, that we want to get in the ring with our fists and black up the eyes, and knock down, too, if we can, those who make money by such means.

Collier's Weekly recently got after certain manufacturers of gin who published labels on their bottles calculated to incite negroes to criminal assaults on white women. They sold the gin, the negroes assaulted white women and were hanged and burned for their crimes. When *Collier's* got after these people they were accused of many crimes, among which was that of "officiously meddling with legitimate business for the sake of an advertising-crusade." That the laws of the specified locality were speedily modified and the offensive labels suppressed seems to prove this "officiousness" was a very necessary and creditable piece of work.

PHOTO-ERA will tell you, if you ask it, that it has the highest regard for the possibilities of the motion-picture and nothing but praise for good ones; but it believes the other kind should be suppressed; and so do I; and so, I believe, does Mr. Haines.

The Moving-Picture News seems to think we have been visiting in the backwoods. Now if I had confined my visits to one city, and that one my own, I might admit it, for the sake of argument, even though I don't think Washington exactly the rear of the forest. But I have "Nickelodeoned" in Philadelphia, New York and Rochester, Baltimore, Boston, and in smaller towns, and there is a lamentably large proportion of disgusting film shown in all the cities and towns, albeit in all there are some first-class houses where nothing of the kind is to be seen.

I went to one show, recently, and saw a certain film. I had the curiosity to inquire if it was recent and new, or old and worn out. I was indignantly told it was very, very new — just received — they did n't have old film. It depicted the vacation of a husband. He packs his bag — in about three seconds — says good-by to his wife in a snap-shot, and flies for his train. On the train he makes friends with a girl, and kisses her as he goes through a tunnel. Then a letter to his wife is thrown on the screen in which he expresses his disgust with his stupid and uneventful journey. He goes to the theater in the town of his destination, flirts with a chorus girl, takes her to supper, and the film ends as he takes her on

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his lap and has a vigorous kissing-match with her. Ugh! Following this is another letter to the deceived wife, who is told what a stupid time he is having, and how anxious he is to get home. Next a bar-room scene, in which Hubby drinks, is robbed, fights and is haled to the police station, where his wife finds him, and where he makes up with her in a most touching manner, with winks at the audience on the side.

Harmless? Possibly, to you or to me. We have reached reasonable years of discretion; we know what society thinks of this class of man; and we recognize that while humans are humans vice will be vice. But what of its effect on the two callow youths who sat in front of me, with the two girls of fifteen or thereabouts who sat with them? What perspective had *they* on life to judge the true from the false? The audience laughed heartily at the deceived wife, and at the antics of her husband, and at the readiness with which he was able to make all right with her again. Is this the sort of moral teaching to produce good men and women?

In another house I saw a film in which the most brutal treatment was handed out to an old man; another film showed a dog with a tin can tied to his tail and a chase after it; still a third show had some more blood and thunder, detective, murder, battle, and sudden-death films to show, in which men were shot and woman abducted and, presumably, mistreated with the utmost abandon. In every such house to which I went I found a large proportion of very young men and women. The moving-picture of this sort is nothing less than a very live dime-novel in short and condensed, but very spicy, form. What we take in through the eye from a picture has a much more powerful effect on the mind than what we take in from print and have to use as the basis on which to build an imperfect mental picture. If a dime-novel can do any lad or girl harm, it is perfectly obvious, without further argument, that the same dime-novel acted out — and acted out well, at that — and thrown on the screen with the accompaniments of a crowd evidently enjoying the performance, dim lights, and music — of sorts — to add to the effect, is going to do more harm.

It will not do for the Nickelodeon people to say that the public demands this kind of film. It does n't do a publisher any good to say that the public wants indecent books. The Post-Office won't let him use the mails for them. When a review of a book is published which hints at the risqué the publishers rejoice — some of them at least — knowing it means a sale of a large number of copies. The moving-picture people know that the more dramatic, the more true to that side of life of which the average person but hears and never sees, he can get his film, the more packed houses he will get. But most books sold are not risqué books, most plays seen at the theater are not risqué plays, and most moving-picture shows could entirely cut out dime-novel or indecent film and have plenty of people glad to pay their money to sit through the performance.

I should like to record one show that I saw as an incident of this kind. There was a long film giving the adventures of some ancient Spanish gentleman, who went after the gold hidden by a miser and fought for it, and came back and

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HARRIET LYNAM IN THE FOG

claimed his lady's hand in marriage; a cameraphone picture of a lad and lass singing by the side of a stream, and an alleged humorous picture in which a soldier makes love to a nurse-maid and an old professor trying to catch a butterfly stumbles on them and is thrown in a stream for his pains.

The first was innocuous. It was so obviously painted scenery and costumes which were before you that I doubt even the most innocent ten-year-old would have thought it real life. Moreover, the story was well told, and the fight was the fight of the single-handed and the virtuous against odds and brutal thieves; so the moral, despite the bloodshed, was good. The cameraphone performance was wholly harmless and rather pleasant; and the last film, vulgar and loud as it was, and with humor of the horse-play variety, was with no hidden point of poison in it. The love-making was innocent and open, and obviously only incidental, and the old man who was so unfortunate was not injured by his fall.

Now here was a show which was crowded — the Lord in his wisdom knows

MRS. W. W. PEARCE "PEEK-A-BOO"

why, but it was — showing evidently to any one that it does n't require blood and thunder and vice to attract the crowd.

I would like to say emphatically that I am not setting myself up as a prophet of the moral law. I have yet to see anything in a motion-picture show which would do a grown man or woman any harm besides that of possibly degrading the taste. I don't suppose any normal human being is the worse for reading the Old Testament, "The Rape of Lucrece," "Mademoiselle de Maupin" or "Three Weeks;" yet I would not give any of them freely into the hands of Fourteen to read. I go frequently to a good vaudeville house, and I notice that most of the audience stays for the pictures after the regular performance, and I never have seen any film at this house other than of travel, wonderful magic, humor or current events.

I think even the editor of *The Moving-Picture News* must recognize that in his temperate remarks and his "believe that the manufacturers are, to a very large extent, trying to eliminate," etc., he has shown that he acknowledges the corn. He, and you and I ought to be able to *know* that manufacturers will not make and sell such film, and that if they must make it and sell it, local regulations should forbid such shows to be open to the young. If a barkeeper gives a lad of twenty a glass of beer he is hardly treated, in some cities —"boy under age." I would ten times rather have my son go to a bar-room at sixteen and have a glass of beer than to some of the moving-picture shows I have seen. I would

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rather give him such books as Boccaccio's "Decameron" or the unexpurgated "Arabian Nights," and let him read them and have them explained, than I would many a dime-novel that I have seen. In the one he would get real life of certain periods — no matter of how low an order; in the other, merely a distorted view and a poor perspective. If possible, I should keep both from him when he is young; but if he had to have one or the other, my choice would be as stated.

It seems to me that, regardless of what *The Moving-Picture News* has kindly said about my being so well known, and that whatever I may write and whatever Mr. Haines may write on this subject will have a world-wide quotation, and therefore, presumably, authority, the strongest thing I can say does not rest on any possible photographic knowledge or reputation as a writer on photographic topics, but on what I may say as a parent. If I, who am the father of a boy, can truthfully and sincerely say that, with the exception of the moving-pictures given in good vaudeville houses, and church entertainments and such, I have never seen the moving-picture show I should care to have him witness before he is enough of a man to know the true from the false, I have uttered the harshest criticism which can be spoken of the film which is commonly shown to-day.

That there is good film and plenty of it; education film and miles of it; trick film, harmlessly entertaining, by the barrel, and funny film, until there is no rest, by the carload, I do not attempt to deny. But until I can find a show which shows these and only these, or others like them, which eschews the "canned melodrama" of vicious tendencies, I am going to stay away, myself, as far as my pleasure is concerned, and I am going to keep my family away. This is about on the par with the man who said he wished to "stop the paper" when he cut off his subscription; but it is the only form of individual protest against unsatisfactory conditions which can be effective. If every other parent in every city of the country felt the same way there would soon be a change!

Mayor McClellan had the courage of his convictions when he closed up five hundred and fifty moving-picture shows in New York City, because of protests against the majority of them by press, pulpit and layman alike. If the guardians of the public morals — Comstock, the much maligned, who has done so much that is good, even while he did so much that was foolish; the Watch and Ward Societies; the Rescue Missions, etc.— will do their part and do it quickly, the moving-picture people will soon come to see that it is not only good citizenship, but good business, to get rid of the vulgar, the loose-moraled and the uncivilizing film they so often show, and present only what is interesting and, perhaps, what is exciting, without what is harmful, to their audiences.

Let *The Moving-Picture News* give another paragraph to this matter — let the editor come out good and strong against film which has most of the dime-novel tendencies, and I can assure him that, so far from wishing it or the business a black eye, it will have no better supporter than myself. I am sure PHOTO-ERA will say the same, and I would wager on Mr. Haines.

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HERMANN LINCK — SOLITUDE

Sulphur and Permanence

R. CHILD BAYLEY

AMATEUR photographers are apt to look upon the permanence of their prints as an important quality. In a year or two they may not care whether the prints they make to-day have faded or not; but at present they represent the high-water mark of their photographic skill, and it is only natural that they wish that evidence of their ability to be lasting. How to make it so is, therefore, the perpetual problem.

The great enemy of the silver print is sulphur. By silver print, for the moment, is meant a print on P. O. P. (gelatino or collodio-chloride), bromide, gaslight, or plain salted paper. In all of these the finished image contains silver, if it does not consist wholly of that metal. In the case of a properly-finished bromide or gaslight print the image should be one of plain, finely-divided metallic silver. In the case of prints on salted paper or on printing-out papers it should consist of metallic silver combined with more or less of metallic gold or platinum, or whatever metal has been applied in the toning-process. Sulphur slowly attacks silver, and the fine state of division of the metal in a photograph makes it far more susceptible to the action of sulphur than a solid block of the silver would be.

The photographer may wonder whence the sulphur is to come that is going to cause his print to fade. There are two chief sources for it. One is the paper of the print itself; the other, the atmosphere. Hypo contains sulphur; and however carefully the print may be fixed and washed, there may remain traces of salts containing sulphur in the film of the picture or in the fiber of the paper. Then, again, hypo is used in the manufacture of some papers and cards; and, although the paper of the print itself is sure not to contain any, the paper or board on which the print is mounted, unless made for photographic purposes by a reliable firm, may contain hypo. Even the picture itself may contain sulphur, as we shall see subsequently.

Hypo, so long as it remains hypo, has probably very little effect on the permanence of the silver print. It should be thoroughly washed out of the print, as far as washing can remove it, of course; but it only becomes actively harmful when it has undergone decomposition. Acids decompose hypo almost at once, forming compounds which are most harmful to the print. It is for this reason that it is so important that the mountants used for photographs shall contain no acid. It is not that the acid itself is injurious — it may or may not be — but it tends to convert any hypo left in the print to an actively injurious salt. For the same reason, when platinum toning-solutions, which are generally acid in character, are used it is important to wash the prints between toning and fixing, and to add a little bicarbonate of soda to the hypo, so as to neutralize any traces of acid there may be in the print, and so prevent this action from taking place.

The combined toning and fixing-bath has a very bad reputation as far as the permanence of prints toned in it is concerned. Some prints toned in combined

baths have remained unaltered for many years, showing that in some circumstances the combined bath may be quite harmless; but there is no doubt that in a great many cases prints toned in a combined toning and fixing-bath have faded. This is due, beyond all doubt, to the sulphur introduced into the print in the combined bath. There is a very curious thing about some of the compounds of silver and sulphur in a gelatine film. The color of the picture they produce so closely resembles the color produced by gold-toning properly carried out that the photographer may be misled into thinking that his toning-bath is depositing gold on the print, when actually it is sulphurizing it and sowing the seeds of speedy fading. Two prints may be toned in the same bath, and one may have a proper deposit of gold upon it, increasing its chances of permanence, the other may contain at the finish no gold at all, its rich color being due simply to compounds of silver and sulphur.

It is important, therefore, when using a combined bath to take care that it is gold and not sulphur-toning which is taking place with it. The only way of doing this is by noting how many prints are toned in the bath and how much gold was put into it, taking fresh solution before there is any chance of all the gold in the bath being exhausted. Two grains of gold should be allowed to each full-size sheet of paper. There is another danger from the improper use of the combined bath. As the prints are taken out as soon as the right color is obtained, it may happen, if the bath has not been properly made up, that they are toned before they are fully fixed. In such a case the prints ultimately will develop discolorations of a patchy, irregular character. These are avoided by keeping carefully to the maker's formulæ. But the combined bath is better avoided altogether by those who lay any stress on permanence.

It may seem strange that while so much is said about the injurious action of sulphur, it is nevertheless a fact that bromide and gaslight prints are deliberately toned with sulphur, and the prints so toned enjoy a good reputation for permanence. A little explanation seems to be necessary. It is, briefly, this. The compound known as silver sulphide is that which is formed in these orthodox processes of sulphur toning, when they are properly carried out. Silver sulphide is a brown substance; the whole of the silver forming the picture is converted into silver sulphide, and the image accordingly is changed from black to sepia. This silver sulphide is an extremely permanent substance; probably it is far less likely to alter than silver itself; so that the sulphur-toned bromide or gaslight print is actually more permanent after toning than before. Sulphur has already done its worst on the image; what sulphur the print contains is firmly combined with the silver, and a permanent print is the result.

The silver print which fades owing to the presence of sulphur is in a different category. The sulphur does not simply convert the image into silver sulphide, as in sulphur-toning, but into an extremely unstable body called silver subsulphide, and into complex compounds of silver, sulphur and gelatine. These in their turn undergo further changes, and the print gradually fades in the way only too well known.

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GEORGE VIEWEGER NIAGARA FALLS

The question is sometimes asked whether this or that paper gives a permanent print. It is hardly a matter of make of paper at all, but of the treatment it receives at the hands of the photographer. Now that the reasons for the fading have been given, it should be comparatively easy to take care that it shall be circumvented.

To ensure as far as possible that a silver print should be permanent, we must attend to the following points:

(1) The toning must be with gold; that is to say, we must guard against attempting to tone with a bath exhausted of gold.

(2) No acid must be introduced into the fixing-bath.

(3) Fixing must be complete. If fixing is not complete, no amount of washing will get rid of the decomposed hypo.

(4) Washing should be thorough.

(5) If the print is to be mounted, the mountant should be free from any trace of acidity, and the cardboard should be pure.

If these points are attended to we shall at least know that we have done all we can to ensure permanence. It will then be a matter dependent on the nature of the paper employed. Bromide and gaslight prints, in this respect, are generally admitted to be more permanent than prints on P. O. P. The image on a P. O. P. print does not consist of pure silver, as it should do in bromide or gaslight; and, being complex, is certainly more readily attacked by sulphur in the paper or in the atmosphere. Sulphur-toned bromide and gaslight prints probably come first, therefore, in order of permanence; then the same prints untoned; then prints on P. O. P. toned with gold; and then P. O. P. prints toned

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HONORABLE
MENTION
REFLECTIONS

E. T. WOOD REFLECTIONS

with platinum. In putting platinum-toned prints behind gold-toned prints in such a case, we do so because the toning is not complete. Were platinum to be substituted for silver completely the print might reasonably be regarded as permanent as a platinum print pure and simple. But platinum-toning at the most is only a slight plating of the silver image with the rarer metal, and if the silver is attacked the image fades in spite of the presence of some platinum.—*Photography and Focus.*

On the Comparative Merits of Different Developers

MALCOLM DEAN MILLER, A.B., M.D.

I. Materials and the Criteria of Perfection

DEVELOPMENT is a subject of perennial interest to most photographers. So much, however, has been written on this topic that I should feel great diffidence in adding to the already enormous mass of material, were it not that what I have to say is based on careful experiments extending over a long period of time. For some years I have made a study of all the principal agents, exposing and developing scores of plates; and my conclusions from the data thus collected may be of interest.

Before taking up in detail the results of my tests, I shall clear up the preliminaries as to plates, and try to establish reasonable criteria for judging the negative. The second paper will deal with developers primarily for plates, and the last, with those specially suited to papers.

The negative is, of course, merely a means to an end; but since the perfection of that end, the print, depends largely on the quality of the negative, it is important to secure as truthful a record of the subject as is possible to obtain in monochrome with a gelatine emulsion. Careful selection of material is the first essential. There are several brands of plates on the market with which it is almost impossible to obtain a good negative. Like the spectacles in "The Vicar of Wakefield," they are made to *sell:* moderate speed is attained by digestion of the emulsion, which, however, is coated so thinly and is so poor in silver that no developer will produce sufficient density or a harmonious range of tones. The cheapest are here, as always, the worst. It is far from economical to save a few cents per dozen on plates only to find that the negatives are practically unprintable. On the other hand, it is not necessary to pay the top-notch price, for many of the medium-priced brands are quite satisfactory for general work.

So much for recommendations. Coming now more specifically to the choice of plates, it seems necessary to establish certain definite principles as to truth of rendering in monochrome. Every one knows that no picture-process is capable of rendering the full scale of light and dark as seen in nature. The artist, with his pigments in oil or water, is limited just as the photographer is. No color is bright enough to represent the full force of sunlight; and, at the other end of the scale, no color or combination of colors can convey the darks with all their subtle gradations. The artist is forced to shorten his scale. The old masters deliberately painted down, tending to make their pictures mostly low in key, with small areas of light which contrasted effectively with their carefully-graded, transparent shadows. This was mainly due to the lack of bright yellow pigments. With the advance of chemistry, however, and the advent of the "plein air" and the "impressionist" schools, the artists found ways to lengthen their scale, to

paint up in key, and to get the impression of light by the juxtaposition of purple and yellow. The modern picture is full of light because men have studied nature and come to know that the landscape, at any rate, is flooded with light. It is the close study of values, by which is meant the relative darkness or lightness of colors, that has made modern painting so true to nature.

Photography, on the other hand, has not made so great an advance. The limits of its scale of values, pure white paper and pure black, do not reach the ends of the scale as seen by the eye. Even the blue sky is higher in tone than a piece of white paper in shadow held up to it; yet we must represent the sky as a subtle gray or lose the effect of atmosphere. It is true that sometimes a white or a yellow object on the earth, when bathed in sunlight, will appear lighter than the sky; but as a general thing no considerable part of the picture can properly be rendered lighter than the sky. Our scale extends only from pure black to a faint gray, with the pure white for accent. The black has to be sparingly used, for the landscape contains, as a rule, very little shadow-color dark enough to be represented by a pure, deep black.

Analysis of the average photograph shows an anomalous state of things. The shadow-masses are too low in tone; they lack transparency and detail. This defect increases as the distance of the observer from the picture is increased. To illustrate this, take any print which is too light when viewed at, say, sixteen inches from the eyes, and place it in a good light at a distance of six feet. Observe how the detail is massed, how the shadows darken, and how the lights gain by contrast. Part of the difficulty is due to the fact that the print on its opaque support is seen by reflected light. The same negative printed on a transparency-plate will give much more depth in the shadows, as well as more gradation in the half-tones. The basic difficulty, however, is in the false rendering of color-values by the plate. The only solution lies in orthochromatic plates.

The older, and still the more popular, type of orthochromatic plate was an improvement in some respects, but in the hands of the average worker it produces effects more horribly unnatural than those of which I have already spoken. Its sensitiveness to yellow and yellow-green is ample, but requires very full exposure, and development in weak solutions. It renders shadows too dark, increasing the scale of contrast, to be sure, but often overdoing it. The newer type, the only true orthochromatic plate, is a great advance.

This plate, usually called panchromatic, is red-sensitive. It requires a light yellow ray-filter, which increases exposure from three to five times, to hold back the ultra-violet, the violet and the blue rays and to allow the yellow, the green and the red to impress the plate. Used quite fresh, fully exposed through such a filter, and not over-developed, it gives the most truthful rendering of any plate yet produced. Under-exposure results in clear, detail-lacking shadows. Over-development obliterates the gradation in the half-tones. The key of the resulting photograph is high, depending on contrasts of small masses of shadow and light, just as the painting depends on purple and yellow, for its accents. The shadows are luminous and transparent, lighter in tone than in the ordinary

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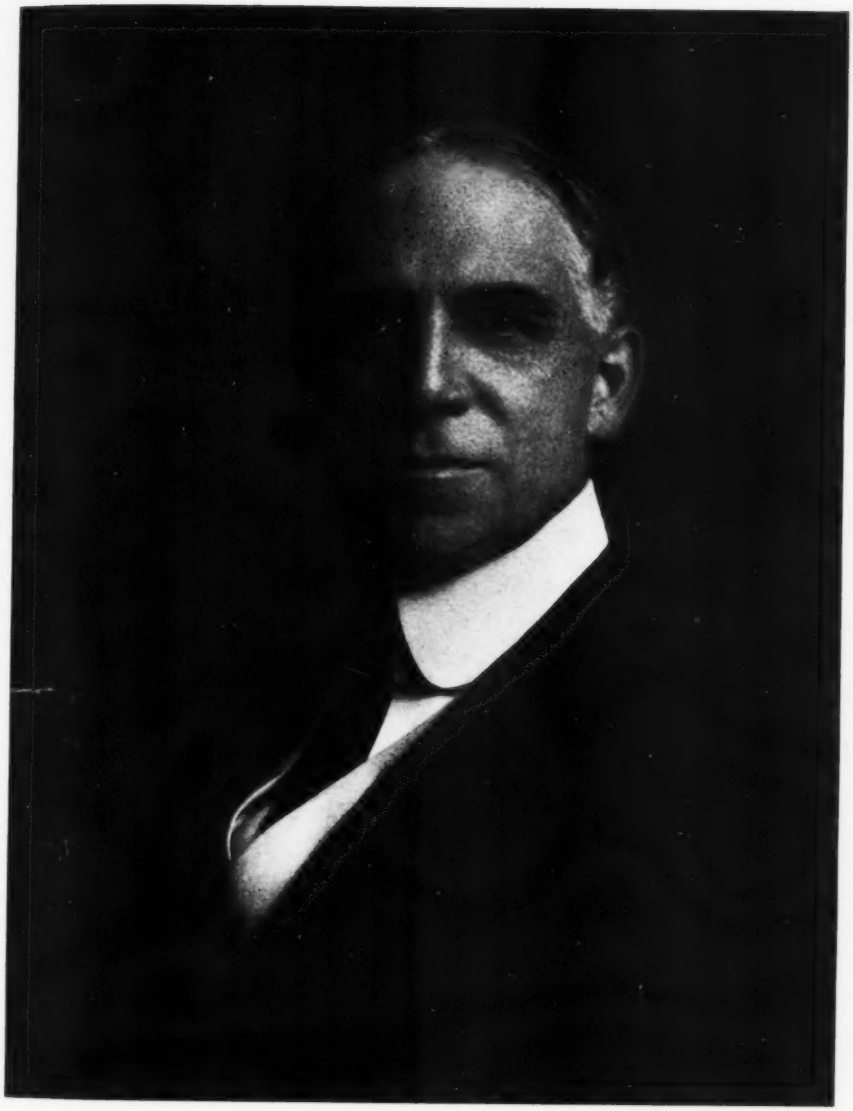
CHARLES W. JEROME CHILDHOOD

photograph. The whole picture is full of subtle gradations; and, in the last analysis, it is only by gradation that the monochrome picture can express color.

Red-sensitive plates, then, are almost the ideal negative-making material. With increased demand we may hope that they will be made non-halation as well, preferably by the use of a colored undercoating, as in the Agfa "Isolar" and the Lumière "Simplex" non-halation brands.

The manipulation of these plates requires more care than is needed for the Ortho or Iso plates. It is best to load holders in absolute darkness. After the



W. M. HOLLINGER
PORTRAIT OF DAVID BISPHAM

plate is wet with the developer, however, it is possible to use a red or a green safe-light* to determine the appearance of the image for factorial development or to inspect the back of the plate for the first high-lights. Exposure having been calculated by meter, it is necessary only to inspect the plate briefly at the close of development. My rule is to take the plate out as soon as the highest light has come through to the glass, to rinse well under the tap for about a minute, and then fix for twenty minutes in a fresh acid-hypo bath before removing for inspection. The only trouble likely to occur in practice is the formation of fog. Perfectly fresh plates show none, but it increases rapidly with age, and by the end of two or three months in summer, or four or five months in winter, is usually excessive. It is well, on this account, to use a very quick-working developer with enough bromide to prevent the appearance of fog, and to be sure to time fully. The speed of the plates is best found by practical test, although the listing as given in the PHOTO-ERA tables is accurate as a basis to work on.

With the red-sensitive plate, established as the ideal material for negative-making, how can we get the ideal negative? This question will be answered in the second paper. In conclusion, I will define the ideal negative as one which possesses a full range of gradation from absolutely clear glass in the deepest shadows to high-lights dense enough to give a pure white in the lightest spots, yet full of printable half-tones; free from fog, veil or yellow coloration; full of detail in the shadows, and of medium intensity, so that it will print just as it looks on black and white or sepia platinum or on normal or portrait-grade developing-paper.

(To be continued.)

*A red safe-light may be made by staining a fixed plate with Methyl Violet 6B and using it with a sheet of copper-flashed ruby glass. This combination allows only the lowest end of the red to pass. The easiest way to get a green safe-light is to purchase the Virida papers as furnished by the Lumière Company for use with Autochromes.

GEORGE G. MCLEAN — PANEL OF ROSES

Vigorous Carbon Transparencies from Weak Negatives

IT is tolerably well known that in reproducing negatives, whether of the same size or enlarged, the results depend very much upon the character of the transparency from which we start. If this be thin and feeble the enlarged negative will be poor and flat; for it is next to impossible to obtain vigorous negatives from flat transparencies, whatever system be followed. At the present time it is pretty generally admitted that the best transparencies for making enlarged negatives are those by the carbon process, and this method is almost universally employed by professional enlargers who work by way of enlarged negatives. One of the reasons for this is that there is a more perfect gradation in the carbon image than is usually got in a silver one. In the silver picture we have only the silver forming the image in a perfectly even layer of the vehicle holding it, whether that be gelatine, collodion or albumen. In the carbon image we have not only the pigment, but with it different thicknesses of the vehicle — the gelatine. The pigmented film is thin in the lights; indeed, in the extreme high-lights there is practically no film at all, while in the shadows and darkest parts it is of considerable thickness; so that the gradation is due not only to the pigment, *per se*, but also to the varying thicknesses of the film which carries it.

It is very generally recognized that the best negatives for carbon printing are those of a vigorous type. The light then penetrates somewhat deeply into the tissue in the shadow, and a considerable thickness of the gelatine is rendered insoluble in the darker parts of the picture. As a matter of fact, a carbon picture is in reality a relief in gelatine — *plus* a pigment. This may often be seen in paper prints made from strong negatives, but a more pronounced relief is seen if the picture be developed on a rigid support such as a glass plate. But if the print is made from a thin and poor negative the relief will be but very slight, and as a consequence the print will be feeble and lacking in contrasts. This, however, may to an extent be overcome by modifying the strength of the sensitizing-bath, yet it may not be known to every one that carbon transparencies can be intensified by different methods. Such intensification is, in principle, quite different from that of the intensification of silver images. In the latter it is the pigment forming the image — i.e., the silver — that is acted upon, but in the former it is the vehicle holding the pigment (the gelatine) that is acted upon, and not the coloring-matter. That being the case, it is manifest that the greater the thickness of the gelatine the greater will be the intensification obtainable. Therefore, when dealing with feeble negatives the object should be to get a high relief in the image, and this is the point that will now be dealt with.

For making transparencies from negatives of, we will say, an average type, nothing can be better than the special transparency tissue made for the purpose. But for very feeble negatives that require to be intensified afterwards it is not

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the best, since, in consequence of the large amount of pigment it contains, the light cannot penetrate deeply into the film. With such tissue there is always very little relief. If two prints be made from the same negative, the one on the "special transparency" tissue and the other on one with little pigment, such as some of the portrait tissues, and if the two be developed on glass, it will be seen that the one, though dense in the image, has little or no relief, whereas the other will be more or less in high relief, though it will not be so dense as regards color. Seeing that it is only the gelatine that is acted upon by the intensifying-agent, it will be obvious that the one with the strongest relief is the one that will yield the densest picture when intensified. If the two pictures be now put into a solution of permanganate of potash, which is the simplest and at the same time the best intensifier, for a few minutes, and then washed, it will be found that the thinner print has gained considerably in density, while the other has changed but little. If the permanganate is allowed to act for longer the thinner transparency will go on gaining in depth, while the other will remain very much as it was at first, and in the end the thin picture will become the stronger. The strength of the permanganate solution employed is of very little moment — the stronger it is, the quicker is its action; ten to twenty grains to the ounce of water is a good proportion to use.

From what has been said it will be recognized that as the high-lights of a carbon transparency are practically bare glass, there is nothing in them to intensify; hence, within certain limits, any amount of vigor may be obtained by intensification — in fact, far more than is ever required in practical working.

Only the permanganate of potash has been mentioned as an intensifier, but there are several others that can be used, and various colors obtained. For example, if the transparency be put into a one per cent solution of nitrate of silver until the film is thoroughly permeated, then slightly rinsed, and afterwards flowed over with the ordinary acid-pyro developer (as used in the collodion process), with a few drops of nitrate of silver solution added, the picture will be intensified, and be of a pleasing warm brown tone suitable for lantern-slides. If the transparency be immersed in a solution of a salt of iron, say the perchloride, then rinsed, and afterwards treated with a weak solution of gallic acid, a strong velvety purple-black will result. By varying the iron salt, and following it with pyrogallic acid, infusion of nut-galls, logwood, etc., a great variety of tints may be obtained. By first treating the transparency with a solution of bichromate of potash, and then with one of acetate of lead, a yellow color results, owing to the formation of the yellow chromate of lead in the film. Many other colors may be obtained by means that are analogous to those employed in the dyeing of fabrics. —*British Journal of Photography.*

You can do nothing in art without intuitions, but between whiles you must work hard to obtain the materials out of which intuitions are made. — INNESS.

A Formula for Tank Development

R. E. CRANE

THE following formula will probably be of interest to photographers who use tank development in the production of their negatives. It is based on the use of pyro, as this developer is peculiarly fitted for tank development; the objection that it stains the fingers being obviated in this case by the fact that it is generally used in a rather weak form, and that there is very little necessity for putting the fingers into it. The formula, however, will probably apply to other developers without change.

The time of development which a negative ought to receive depends upon three things; viz., the character of the developer, its temperature and the amount of contrast desired in the finished negative. The higher the temperature of a given developer, the shorter the period of development must be to produce the required contrast, and *vice versa;* and the higher the degree of contrast desired, the longer the period of development at a given temperature, and *vice versa.*

The amount of contrast in the negative will, in the development of this formula, be measured by means of the scale of contrast-factors explained in the *Photo-Miniature* No. 66 ("Practical Methods of Development"), pp. 342, 343. On page 343 is a table giving the development-periods for different temperatures and contrast-factors, for use with a special developer. In the contrast-scale the factors range from 4 to 13; the higher the factor, the greater the amount of contrast expressed. A paragraph from page 342 will explain their use:

"With regard to the choice of the contrast-factor among those given at the head of the table, this must be determined by the personal preference of the individual as to the general character of the negative desired. Naturally this preference will be considerably influenced by the amount of contrast in the subject, this depending on the character of the subject and its illumination. In a normal subject such as a sunlit landscape, where the range of contrasts is fairly large, softness will be gained by choosing a rather low contrast-factor, and crispness with a decided relief can be secured by the choice of a somewhat higher factor. In portraiture, where the range of contrasts is often small and softness is generally desirable, a low contrast-factor is generally necessary. Contrariwise, in photographs of carvings in bas-relief, where the contrasts in the subject usually require emphasis, a somewhat higher contrast-factor should be chosen."

We are now ready for the mathematical part of our subject. Let P be the time of development for the temperature 65° F and the contrast-factor 5. 65° is a good temperature for developing, and the factor 5, while not standard in any way (many would prefer a higher factor for the average negative), is a convenient one about which to build a formula. It is the factor used in the 20-minute tank-development of the Kodak film tank-developers.

Let x be the time of development for any temperature, t, considering the contrast-factor as constant for the moment. We will assume that for every de-

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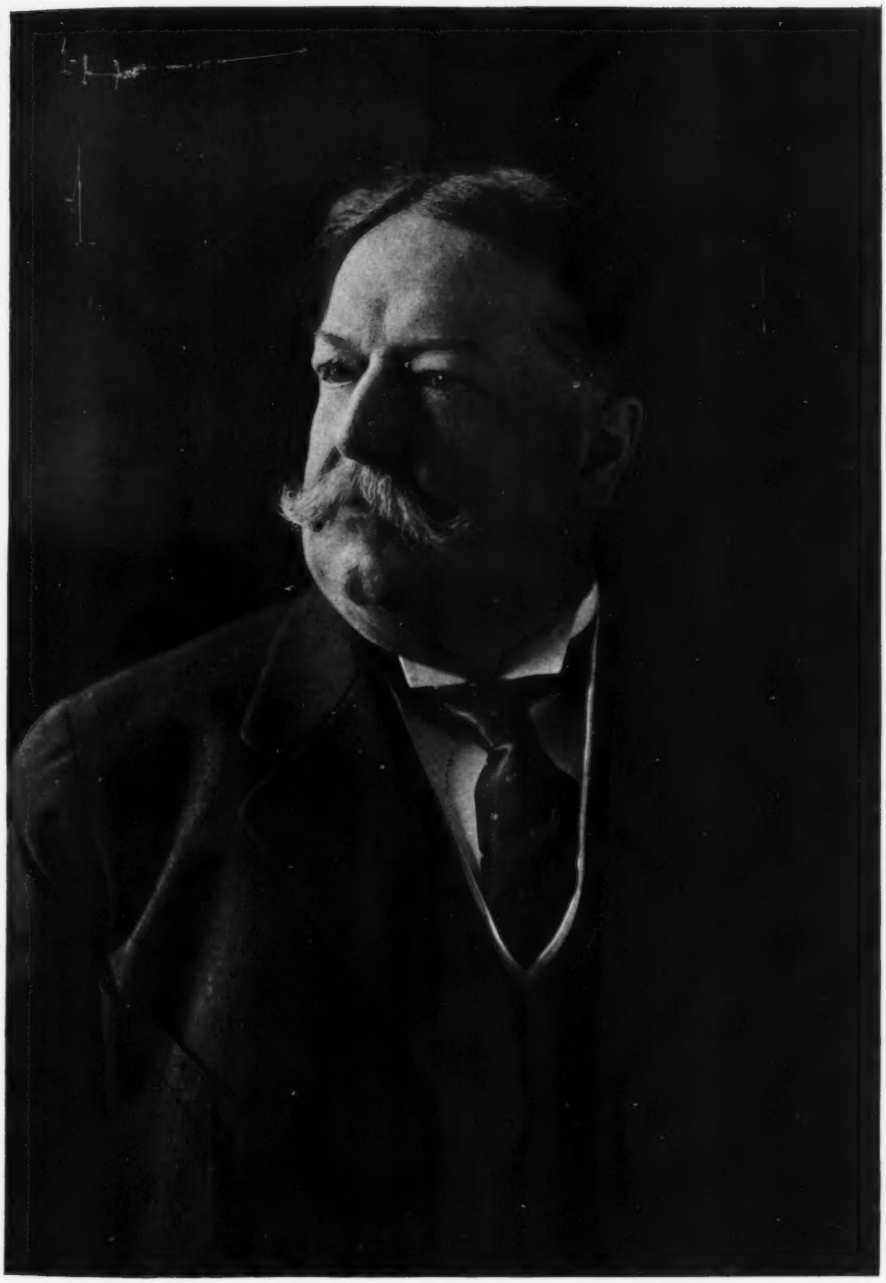
F. H. RICHARDSON RUTH

gree of temperature higher or lower than 65° P must be decreased or increased by $\frac{1}{20}$ of itself. This assumption is the same as that made in the table given for use with the Kodak film-tanks, modifying the regular 20-minute development for temperatures other than 65°. This table ranges from 45° to 70°, and it is evident that the assumption would be invalid much outside these limits. For example, at 85° the required period of development would reduce to zero. Up to 70°, however, we are perfectly safe in assuming the law to hold. It is practically identical with the law deducible from the table in the *Photo-Miniature;* that is, up to 70°.

Putting our assumption in the form of an equation, we have:

$$x = P\ (1 + \tfrac{65 - t}{20}) \qquad (1)$$

Now let D be the proper period of development for any temperature, t, and any contrast-factor, f. In equation (1) we have x in terms of the factor 5 and any temperature, t. In order to express D in terms of x we will assume that for every unit of contrast-factor higher or lower than the factor 5, x must be decreased or increased by $\frac{1}{8}$ of itself. This assumption is the one at the base of the table in the *Photo-Miniature.* We can now write:



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THE PRESIDENT

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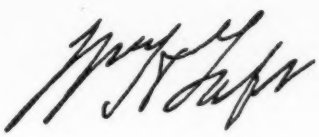

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$$D = x\,(1 + \tfrac{t-5}{5}) \qquad (2)$$

To obtain the complete expression of D we must substitute in (2) the value of x from (1):

$$D = P\,(1 + \tfrac{65-t}{20})\ (1 + \tfrac{t-5}{5})$$

This expression looks complicated, but is capable of much simplification, and gives us the standard formula:

$$D = P\,(\tfrac{f\,(85-t)}{100})$$

This equation, of course, takes on special forms with special values of the variables P, t and f. If we keep to a temperature $t=65°$, the formula becomes $D=P\,(\frac{f}{5})$. When $t=60°$, $D=P\,(\frac{f}{4})$. If we use a factor 5, we get $D=P\,(\frac{85-t}{20})$. In the Kodak film-tank development the period P for 65° and $f=5$ is 20 minutes. Putting $P=20$ we have $D=f\,(\frac{85-t}{5})$. With $t=65$, $D=4f$; that is, using the film-tank, with the developer at 65°, the time of development will be the factor of the desired contrast multiplied by 4. At 60°, $D=5f$. Using $f=5$, we have, with the film-tank, $D=(85-t)$.

The following table gives the values of $f\,(\frac{85-t}{100})$, the coefficient of P in the standard formula.

t \ f	4	4.5	5	5.5	6	6.5	7	8	9	10	11
60	1	1.13	1.25	1.38	1.5	1.63	1.75	2	2.25	2.5	2.75
61	0.96	1.08	1.2	1.32	1.44	1.56	1.68	1.92	2.16	2.4	2.64
62	0.92	1.04	1.15	1.27	1.38	1.5	1.61	1.84	2.07	2.3	2.53
63	0.88	0.99	1.1	1.21	1.32	1.43	1.54	1.76	1.98	2.2	2.42
64	0.84	0.95	1.05	1.16	1.26	1.37	1.47	1.68	1.89	2.1	2.31
65	0.8	0.9	1	1.1	1.2	1.3	1.4	1.6	1.8	2	2.2
66	0.76	0.86	0.95	1.05	1.14	1.24	1.33	1.52	1.71	1.9	2.09
67	0.72	0.81	0.9	0.99	1.08	1.17	1.26	1.44	1.62	1.8	1.98
68	0.68	0.77	0.85	0.94	1.02	1.11	1.19	1.36	1.53	1.7	1.87
69	0.64	0.72	0.8	0.88	0.96	1.04	1.12	1.28	1.44	1.6	1.76
70	0.6	0.68	0.75	0.83	0.9	0.98	1.05	1.2	1.35	1.5	1.65

For example, we are using a developer at 68°, for which $P=15$, and want a contrast of 8. From the table, the coefficient of P for 68° and $f=8$ is 1.36. Then $D=15\ (1.36)=20.4=20$ minutes and 24 seconds.

It will be well to repeat that the formula must not be used for temperatures higher than 70°. It is evident, also, that care ought to be taken to keep the temperature of the developer fairly constant throughout the period of development. If during a 20-minute period the temperature rises from 65° to 70° the negative receives the equivalent of 20-minutes development at, perhaps, 67½°, or the same as 23 minutes at 65°. That is, if a contrast-factor of 5 is desired, one of nearly 6 would be obtained.

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HERMANN LINCK WINTER EVENING

Latitude in Bromide Work

C. WINTHROPE SOMERVILLE, F.R.P.S.

TO say that the greater the latitude in a printing-process the greater its value for pictorial and other purposes might, at first hearing, appear unsound, since one might well reply that the greater the play the more irregular the fit, or the more difficult to obtain an accurate rendering.

From a mechanical point of view, this might apply, but in connection with chemical and optical laws it has to be considered in a different light.

In printing-out papers, such as carbon, platinum, P. O. P., etc., there is practically only one form of latitude, and that is its resistance to light-action. It it, therefore, in a sense, automatic with the negative.

Bromide paper, being a development paper, may claim to have three forms of latitude: (1) that due to the inertia of the paper itself, which we may conveniently take to be the combined resistance to light and developer; (2) exposure; (3) chemical control during and after development.

In printing-out papers the action of light creates a definite effect which, for all practical purposes, is a fixed quantity, subject to little or no alteration.

In a development paper the action of light creates an effect which is *unfixed* and amenable to chemical manipulation to be fixed in any desired condition.

This unfixed effect is the great charm in bromide paper to the skilful worker. In the hands of the careless it as often leads to most weird and wonderful results as it does to disaster.

Latitude of Inertia

This may conveniently be likened to the usual house built with cards; one of the foundation-cards slips partly and throws the whole of the edifice under a strain; this is the effect of the action of light on the paper. The application of the developer is equivalent to knocking the card completely away, causing the units, or cards of which the edifice is built, to come tumbling down. At the end of this tumble some cards may still be in a standing-position, but gradually falling; another push in the form of stronger developer hastens the downfall, although it would be only a matter of time for them to fall of their own accord, since their equilibrium had been upset.

If, now, this card house be strongly built a greater push is required to upset it, and it will subside comparatively slowly, lying down in fairly even lumps or solid layers of cards.

Thus is represented the gaslight paper with its high inertia, requiring a strong developer and greater or longer light-action, the layers of cards representing the deposited silver being few, but well defined, in imitation of the gradation-scale. The rapid bromide paper is like the lightly-built house, requiring a lighter touch to upset it, and the result of its rapid tumble being to spread out to a greater area in less-defined layers.

Latitude of Exposure

This is simply a question varying the amount of slip of the foundation-card, leaving the developer to complete the downfall, which will be more or less rapid as the case may be.

Latitude of Chemical Control

If (1) we arrest the downfall by pasting together at any period; or if (2) we apply our hands and remove the cards one by one till we have lowered it as far as we require; or if (3) we take some cards and place them on another part of the edifice, we are exerting chemical control by (1) fixation with normal development; (2) fixation after slow or tentative development; (3) fixation after the use of bromide of potassium. Other methods of control during development are possible, but need not be given here. Then subsequent chemical control may be represented by adding to or taking away cards from the pasted-up edifice; this is intensification and reduction by means of bleaching and redevelopment.

To put the foregoing into practice the following points should be remembered:

1. Gaslight papers have a higher inertia than bromide, requiring a greater exposure — either of a longer duration or to a more powerful light. The gradation-scale is more sudden, more defined, but of smaller length. A more powerful developer is required; but its resistance to chemical treatment is greater in that

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PAUL R. MORRISON
THE NUN

F. F. SORNBERGER A MEADOW POOL

it is not so sensitive, and less in that it will not stand such vigorous or prolonged application without deterioration. Correct exposure and rapid development are almost a *sine qua non.*

2. With bromide paper the exposure may be carried considerably beyond that required to just print through the highest light, and a most excellent result obtained by slow, weak development and the judicious application of bromide of potassium, further correction for a lack of density in the blacks being obtainable by bleaching and redeveloping after fixing.

3. Above all things, it is necessary to remember that, as in all other printing-processes, the quality of the print is initially absolutely dependent on the original negative, although the possibility of corrections for the imperfect negative are greater than with any other process.

Your perfect negative is one in which the exposure necessary to produce gradation through the highest light on development to infinity is sufficient to produce maximum density in the shadows.

If your contrasts are too great your print will be flat from over-exposure — with consequent partial reversal of your shadows. If the contrasts are too slight your print will also be flat, owing to insufficient exposure to the shadows which will fail to obtain sufficient density by the time the high-lights are printed through. — *The Amateur Photographer and Photographic News.*

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EDITORIAL

A Delicate Subject

SOMETIMES a merchant, hotel-keeper, restauranteur, hair-dresser or dentist discovers a mysterious decline in his business. He has not been remiss in attention to his trade — certainly every year has added to his expertness. He tries to ascertain the cause, but it is beyond his own discovery; only the faithful wounding of a friend or a downright complaint reveals the secret. Your average customer is not disposed to express his dissatisfaction, but quietly changes his place of patronage. The merchant, if a complaint is made, at once sets to work to correct the trouble. It often happens, to be sure, that the complaint is not well founded, and even then a prompt apology or polite explanation will restore the pleasant relations between purveyor and patron.

In the case of the portrait-photographer, however, there is perhaps a dread secret against him which is a secret only to himself, a ground of disapproval among his customers — chiefly on the part of the gentler sex — which is of so serious a nature that he may not be surprised if the matter has never before come to his notice. It is not a question of the quality of his work, the sanitary condition of the establishment, the incivility of employees nor the lack of elevator-service — for these deficiencies are not of so delicate a character but that they may be made the subject of a complaint to the proprietor or his representative — but of a personal objection to the operator. It is, in other words, the offensiveness of the proximity of the posing-artist on account of his bad breath. Whatever may be the cause of such an unfortunate physical condition, the individual so afflicted should lose no time to ascertain its origin and correct the conditions; for, even though he possess all the cardinal and Christian virtues, this one fault is enough to disqualify its possessor from engaging in any pursuit which brings him in close contact with others. This affects, particularly, the photographer; he is obliged to approach the sitter when arranging the pose or modifying the composition. Anything disagreeable in his personality in such propinquity is just as offensive to a sensitive sitter as an ill-chosen remark or a lapse in good breeding. And it would be interesting to know to what extent this unconscious offending on the part of the operator has prevented him from obtaining that much-desired pleasant expression. No man of delicate sensibilities will submit to being shaved more than once by a barber who has a tainted breath; indeed, such an unfortunate could not find employment in a first-class "tonsorial establishment."

An unpleasant topic this, and one more fitting for a medical journal than a photographic publication. But when the editor is in possession of trustworthy information regarding the existence of the evil, and realizes its terrible consequences to many a well-meaning and capable craftsman who may be entirely

unconscious of the self-inflicted menace to his welfare, the editor considers it his duty to bring up the matter for attention. This is done in the kindliest possible spirit, and with the sole intention of enlightening those who have not had the benefit of friendly and frank advice on a subject which in some cases may outweigh even professional skill, however great.

Our Annual Contest Pictures

IN his review of the PHOTO-ERA Sixth Annual Photographic Competition, printed in the January issue, the editor stated that the artistic quality of the prints submitted was so uniform that the judges found it difficult to decide upon the successful prints. As originality took precedence over mere attractiveness, these prize-pictures lacked in a measure the element of popular appeal, yet possessed beauty of a high order. Many of our readers will, no doubt, be glad of an opportunity to compare the prize-pictures with those which narrowly missed the approval of the jury. We have, therefore, selected a number of the most attractive of these unsuccessful prints for reproduction, and they will form the pictorial feature of the May issue.

A Decline in Clerical Efficiency

ONE of the greatest industrial problems facing the economists of this country to-day is to find employment for the legion of young people who, with yearly regularity and in increasing numbers, are being graduated and turned loose upon the world by our educational institutions. And it is a curious fact that most of those who, two or three years ago, were so fortunate as to obtain positions in a professional or mercantile capacity, have failed to show the required ability and interest.

What wonder, then, that from every industrial quarter comes the plaint of general inefficiency. The quality of photographic salesmanship, too, is at a low ebb. Photographic dealers are embarrassed for the lack of intelligent and faithful clerks. Photo-finishers of the better class find it difficult to secure efficient and trustworthy assistants, although in both cases the remuneration is generous and commensurate with the character of the service to be performed. Can any one state the reason for this state of things?

The Photo-Era Loan Exhibit

THERE has been a growing and constant demand by public libraries, art and photographic clubs for the loan of collections of artistic photographs. To help meet this the prints awarded prizes and honorable mention during the entire year 1907 in the monthly contests of the Round Robin Guild were sent out for exhibition purposes. So many were the requests for them that a duplicate set was proposed, and both made an extensive tour of the country. A similar collection for the year 1908, surpassing its predecessor in originality and artistic beauty, is now ready. As the demand for this exhibit will, no doubt, be very great, clubs wishing it should apply at once.

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HARRY M. HOPE

THE LAKE SHORE

THE ROUND ROBIN GUILD

An Association of Amateur Photographers

Conducted by ELIZABETH FLINT WADE

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography, although advanced camerists are just as welcome and many are numbered among its members. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free and may be obtained by sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston. Send a stamp for complete prospectus

AN INDEX-BOOK

THE motto of that useful periodical, *Notes and Queries*, is, "When found, make a note of." This was the advice of Captain Cuttle, that eccentric old sailor in "Dombey & Son." He was very fond of quoting, and then desired the one to whom he spoke "to overhaul the catechism till he found it," and then added this sage advice: "And when found, make a note of!"

If we amateurs would take this for our motto how much time and vexation we should save ourselves! We read what seems to be a very valuable formula, or we find hints on convenient ways to do things, directions for remedying defects in negatives, etc., and we think we will remember where we saw the article; but alas, we fail to "make a note of," and when we are in need of just this bit of information we find to our sorrow that we have n't the slightest clue to its whereabouts, for in these days of endless book-making and reading it is a very difficult thing to remember just where one saw the article in question.

Every amateur needs a photographic index-book. This he may make for himself of plain manila paper or tea-paper of good quality, or he may buy a regular index-book. A good-sized blank book with the letters showing at the edge in crescent cuttings is the most convenient form of book, as one must have his index so arranged that he may turn to any letter at once. If one makes his own book he will have to devise his own way of having the letters get-at-able. For instance, he may buy a set of leather letters gummed at one end, which may be attached to the book-leaves in alphabetical order, or he may make his own crescent cuttings and paste letters on the leaves as in the regular books made in this fashion.

The book should be large enough to have the pages ruled in three divisions. The first division should have the name of the topic; the second should have the book and volume, and the third should have the page. In making references to articles in magazines, the month and year should be added to the book and volume. If the item is a short one incorporated with some other article it is a good idea to put a letter after the page, indicating whether the item may be found at top, middle or bottom.

If one wishes to be more up-to-date and spend more money he may make a card-index. One buys the cards and the box or drawer to keep them in, or one may buy a small case which will be sufficiently large to include many subjects besides that of photography. However, one need buy only the cards, for any one at all handy in the use of tools can make a box of a size to fit the cards. The editor has one of these hand-made card-indexes and finds it just as useful as the more expensive cases. This index was started in a pasteboard box ten inches long and a little wider than the cards. With a photograph trimmer, cards the same length but wider than the index-cards were cut, good-sized letters selected from magazine advertisements were pasted at the corners in their proper sequence, and behold a card-index as useful and as handy as the more elaborate case! The index outgrew its quarters and was transferred to a long, deep cigar-box, and it has now expanded so that its new quarters are in a wooden box eighteen inches long. A slanting block at the end gives the cards the proper incline, and a block at the space in front holds the cards in place.

One convenience of this card-index is that one may indicate on the cards the outline of the article referred to or may note the results of the experiment.

In an earlier number of PHOTO-ERA reference was made to a set of scrap-books, and for the benefit of our new members the directions for making will be repeated, queries as to scrap-book-making having come in recent correspondence.

These handy scrap-books are made of manila paper, stout but not too heavy. This paper may be bought very cheaply at any wholesale warehouse. The sheets of paper are folded into booklets about 9 x 12 in size and containing perhaps thirty-two leaves. They are then sewed together with thread, a piece of cord is run through near the top and a brass ring tied into it. The brass ring is for a hanger, these books not being intended either to be set up or laid down on a shelf. Each scrap-book is designed to contain scraps on one subject only. The title is placed on both front and back covers, so that, no matter which way the book happens to be hanging, its title will be in evidence. Instead of writing the title, one should print it in large letters easily seen.

There will be one book on developers, another on toning, another on printing, etc., etc. In

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every box of sensitive plates one finds a circular giving directions for the treatment of this particular plate, developer formulæ, and causes of failure and how to remedy them. Copies of these should be saved and pasted in the book, and one has at hand all the information necessary for the treatment of the plate indicated. Directions for the different gaslight papers would make another scrap-book, and the printing-out papers another, the object of using a different book for each subject being the convenience of having it all in one place and easily found.

In attaching the scraps to the paper, paste only at the corners. This keeps the book in better shape, saves time, and if one wishes to remove a scrap it can be done without hurting either the scrap or the book.

Have two or three outside leaves; then when the cover becomes soiled tear it off and use the fresh one underneath.

With a photographic index and a set of scrap-books one has the answer to many a difficult question. It is not so very long ago that the editor received from a correspondent a letter which contained twenty questions, all but two of which might have been answered had the writer possessed a photographic index.

Let us of the Round Robin Guild from henceforth adopt for our motto, "When found, make a note of!"

DROPS FROM A BOTTLE

Photography suggests an easy method by which a liquid may be prevented from running down the side of a bottle instead of dropping from it as desired. The bottle should be made repellent with a little vaseline on one side, except on the lip or rim whence the drops must fall. White wax dissolved in benzine, painted onto the bottle and allowed to dry gives a much neater result.

SEPIA TONES ON BROMIDE PAPER

A VERY pleasing sepia tone may be obtained on a bromide print by toning it in platinotype solution and then redeveloping it in a weak developer.

Make up a developer as follows:

Potassium chloroplatinite	20 grains
Bichloride of mercury	10 "
Citric acid	90 "
Water	10 ounces

When ready to develop add to this not quite half a dram of a ten per cent solution of bromide of potassium. Place the print in this solution and rock the tray gently till the right tone is obtained. Wash well in running water and then redevelop in the developer used for bromide prints — any formula which one is accustomed to use will answer — diluting the developer by adding to it water, four times the quantity of the developer.

The tone will be a very pleasing shade of sepia, and may be made warmer by omitting the bromide of potassium from the developer.

Amidol is one of the most satisfactory developers for bromide prints. A formula which gives excellent results is made of three hundred grains of sulphite of soda, five grains potassium bromide, five grains of citric acid, thirty grains of amidol and twenty ounces of water.

The image comes up very quickly, but this does not indicate over-exposure, and the print should be allowed to remain in the solution till it gains density.

It is a very clean developer and produces prints of fine black, resembling engravings in quality.

Amidol does not keep well in solution, so it is not advisable to mix more than is to be used at the one time of developing.

Some persons are ignorant of having an artistic eye, until they see artistic work.

The Round Robin Guild Monthly Competitions

Closing the last day of every month.

Address all prints for competition to PHOTO-ERA, *The Round Robin Guild Competition, 383 Boylston Street, Boston.*

PRIZES

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention, and will be awarded a year's subscription to PHOTO-ERA, *to be presented by the recipient to one of his friends not already a subscriber.*

Prizes may be chosen by the winner, and will be awarded in books, magazines, enlargements, mounts, photographic materials or any article of a photographic or art nature which can be bought for the amount of the prize won.

RULES

1. These competitions are free and open to all photographers, whether or not subscribers to PHOTO-ERA.

2. As many prints as desired, in any medium, mounted or unmounted, may be entered, but they must represent the unaided work of the competitor.

3. The right is reserved to withhold from the competitions all prints not up to the PHOTO-ERA standard.

4. *A package of prints will not be considered eligible unless accompanied by return postage at the rate of one cent for each two ounces or fraction.*

5. *Each print entered must bear the maker's name, address, Guild number, the title of the picture and the name of the competition for which it is intended, and should be accompanied by a letter, sent separately, giving full particulars of*

date, light, plate or film, stop, exposure, developer and printing-process.

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA. If suitable, they will be reproduced, full credit in each case being given to the maker.

SUBJECTS FOR COMPETITION

January — "Photographs of News Events." Closes February 28.
February — "Winter Landscapes." Closes March 31.
March — "Historic Pictures." Closes April 30.
April — "The Brook in Springtime." Closes May 31.
May — "Farming-Scenes." Closes June 30.

AWARDS — REFLECTIONS

First Prize: George Alexander.
Second Prize: Paul Fournier.
Third Prize: George H. Scheer, M.D.
Honorable Mention: Paul Lewis Anderson, E. T. Wood, C. W. Christiansen, F. F. Sornberger, S. S. Skolfield, E. S. Gage, A. B. Hargett, Richard Pertuch, E. R. Bolander, T. L. Mead, Jr., Dr. W. A. Rawson.

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

H. H. KEENE.— The ordinary white canvas used by artists makes an excellent flexible lantern-screen. I should not advise you to try to size heavy cotton for such a purpose. Aside from the trouble, the result would not be satisfactory.

JANE F. R.— A formula for a slow reducer is made as follows: ten grains of bichromate of potash, ten minims of sulphuric acid, twenty ounces of water. Place plate in this solution and let it remain until the degree of reduction required is reached. Remove and wash thoroughly. If the plate needs only slight reduction it is well to add a little more water to the solution.

FREDERIC G.— The article to which you refer may be found in the August, 1908, number of PHOTO-ERA. It gives detailed directions for the treatment of defects in negatives. Yes, you may send in a subscription for six months, though it is more advisable to make the subscription for a year. It may commence with the current number if you prefer to have it do so.

A. M. ARNOLD.— To brighten your platinum prints brush them over with the solution known as artist's fixatif. It will bring out the detail in the shadows, which now seems scarcely visible.

C. C. V.— You may send as many pictures as you choose to each of the monthly contests. However, it is wiser to send two or three really good pictures than to send a dozen or more inferior ones. The motto of the Guild is, "Not how much, but how well."

HELEN R.— Use hydroquinone developer for bromide prints where good contrast is desired. For softer prints use metol-hydroquinone. Do not use the oxalate developer for paper. It is apt to stain, and the prints are not as pleasing in color as with either the hydroquinone or with the metol-hydroquinone. To remove the discoloration from your gaslight prints place them in a solution made of one ounce of sulphuric acid, one ounce of chrome alum and ten ounces of water. The prints must be well washed after being submitted to this restoration process and then dried in the usual manner.

RAY LOOMIS.— The iridescent stains on your negative may be removed by rubbing gently with a piece of chamois dipped in a weak solution of Farmer's reducer or, if not of too long standing, use alcohol.

DONALD B. FOSTER.— In developing gaslight paper which has been over-exposed and in consequence comes up very quickly, have ready a dish of weak acetic acid solution and the moment the print has reached the desired depth remove it at once to the acid bath, then rinse and place in the hypo solution.

BERTHA B.— A hardening-bath for Ozotype prints is made of one ounce of alum dissolved in twenty ounces of water to which, when thoroughly dissolved, is added thirty minims of hydrochloric acid. Let the print remain in the bath for five minutes, wash in cold water and then dry.

HOWARD S. D.— Do not use ready-prepared mucilage for gum prints. Make your own mucilage by soaking an ounce of the best white gum-arabic in five ounces of water until dissolved. Filter or strain through fine muslin. A good way to dissolve the mucilage is to place the bottle in a hot water-bath and let it remain on the back of the stove until the gum is dissolved.

S. V. C.— When intensifying negatives that have been dried, they should first be soaked for half an hour in water, to soften the film. If the negative is an old one and the film very hard it may be softened by soaking it for ten or fifteen minutes in an acetic acid solution made in the proportion of thirty minims of glacial acetic acid to each ounce of water.

A. L. P.— The plain paper which you are intending to sensitize according to the formula in the Guild department may be toned either in the separate baths or in a combined bath. In toning in a combined bath use fresh solutions. An old toning-bath has not sufficient fixing-strength.

WILL BRODMAN.— Your negatives are very much under-exposed, and it would be the wiser plan to destroy them and make new ones of the same subjects. It is poor policy to strive to

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GEORGE H. SCHEER, M.D.
ON QUIET WATERS
THIRD PRIZE — REFLECTIONS

FIRST PRIZE
REFLECTIONS

GEORGE ALEXANDER A HAZY AUTUMN MORN

make a good negative out of an under-exposed and over-developed one, especially when one can readily photograph the subject again, as you say you can do.

G. T. R.— The handbook has been mailed you, and in it you will find the subjects for the monthly competitions up to and including May, 1909.

JAMES L. E.— To tint photographic paper soak it, after printing and developing and before drying, in a solution of strong coffee. Another method which imparts a tone to the paper similar to that of an old-time engraving is to immerse the print in a weak solution of bichromate of potash, dry it in the dark and then expose it to the light.

M. L. O.— Marks or abrasions on Velox prints may be removed by sponging the print with a piece of absorbent cotton dipped in alcohol. Use the heavy paper for the negative from which you enclose a print and you will have a much more artistic picture. This print will also bear trimming at the left side just enough to remove the white streak at the back of the chair.

Print-Criticism

Address all prints for criticism, enclosing return postage at the rate of one cent for each two ounces or fraction thereof, to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

"LOVE-IN-A-MIST," F. F. D.— This is a charming study of the pretty flower known as love-in-a-mist. The background is a very light shade of gray, against which the mossy envelope of the flower is outlined distinctly. The arrangement of the flowers is very good, the space being well taken up, but the print will bear trimming at the left side and at the top at least three-quarters of an inch. This will bring the principal object, the blossoms of the flower, away from the center and give better balance. The

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artist also sent several other flower-studies of merit, but the one just described is the only one which has any special value artistically.

"GERTRUDE," H. H. K.— This is a three-quarter length figure-study. The subject stands with one hand on her hip, the other arm and hand being dropped at the side and not in view. This would be an excellent picture were it not for two faults, one of which can be remedied, but the other cannot. The first is the placing of the figure on the plate. It is placed directly in the center, with equal space on both sides. By trimming off an inch at the left the whole effect is changed very much for the better. The second fault is the angle made by the elbow, which is not only very acute, being thrust forward toward the observer, but, the arm being bare, a strong high-light, which is thrown on it, detracts the attention from the face itself. The drapery of the figure is very good, being subdued in tone and in long, graceful lines. The modeling of the face is excellent, as is also the pose of the head. Gertrude is worth trying over again.

"A SNOWY NIGHT," F. E. B.— This print depicts a country road at twilight, and a pedestrian slowly making his way through the snow toward a distant house, the outlines of which are seen dimly against the sky. The subject is excellent and the point of view well chosen, but the negative was much under-exposed. The print has a muddy gray appearance where the shadows lie deep across the snow, and consequently does not suggest snow at all. This was evidently taken near sunset, the air full of mist, and had the exposure been prolonged a trifle more a very interesting picture would have been the result.

"AN IDLE MOMENT," S. L. R.— This is a picture of a woman seated in a chair near a window. A sewing-machine, a quantity of cloth and an unfinished garment indicate what was the occupation. The woman sits with her head turned away from the observer, her hands clasped behind her head and her gaze evidently directed toward the sky. The whole figure shows the relaxation of a tired worker who drops her task for a moment to steal a bit of rest. The fault of this picture is that there is too much impedimenta in the way of work. The seamstress does not as a rule dump her unused material in a pile on the floor. The garment fallen from the hands would have been indication enough of what idea was to be conveyed. The sewing-machine is also too much in evidence and obtrudes itself, taking attention from the figure, on account of the strong high-light on the wood. This would be a subject worth trying again, looking a little more carefully after the accessories and subduing everything in favor of the subject herself.

Plate Speeds for Exposure-Guide on Opposite Page

Class 1/2

Lumière Sigma
Lumière Non-Halation Sigma

Class 1

Ansco Film, N. C. and Vidil
Cramer Crown
Cramer Crown Non-Halation
Cramer Instantaneous Iso
Cramer Inst. Iso Non-Halation
Cramer Isonon
Cramer Trichromatic
Defender King
Defender Ortho Inst.
Eastman N. C. Film
Ensign Film
Hammer Special Extra Fast
Imperial Special Sensitive
Imperial Orthochrome Special Sensitive
Kodoid
Magnet
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular

Class 1 1/4

Cramer Banner X
Cramer Banner X Non-Halation
Eastman Extra Rapid
Hammer Extra Fast
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2

Lumière Ortho A
Lumière Ortho B
Lumière Panchro C

Class 2

Cramer Medium Iso
Cramer Medium Iso Non-Halation

Class 2 1/2

Cramer Anchor
Hammer Fast
Seed 23

Class 4

Stanley Commercial

Class 5

Cramer Commercial
Defender Non-Halation Plain
Defender Non-Halation Ortho
Defender Ortho Slow
Hammer Slow
Hammer Slow Ortho

Class 8

Cramer Slow Iso
Cramer Slow Iso Non-Halation

Class 12

Defender Queen
Seed Process

Class 100

Lumière Autochrome
Lumière Red Label Slow

The Round Robin Guild Exposure-Guide For March

COMPILED BY PHIL M. RILEY

UNDER this caption a brief table of exposures will be given in each issue for the guidance of Guild members during the following month. While the figures are indicative only, they will be found approximately accurate for the assumed conditions they have been applied to. If the exposure-times given are not considered imperative, but as suggestions, possibly to be varied slightly at the discretion of the worker, these tables will prove of great benefit to all who use them.

The table below gives the exposures required by the different subjects and plates mentioned during the month of March, on any fine day between 11 A.M. and 1 P.M, when the sun is shining brightly and the lens is working at f/8, or U. S. No. 4.

Double the exposure if the sun is obscured but the light is fairly bright, or if f/11, U. S. No. 8, is used; also between 8 and 9 A.M. and 3 and 4 P.M. Treble it when the light is rather dull. Increase it four times when there are heavy clouds and very dull light, or if f/16, U. S. No. 16, is used; also from 7 to 8 A.M. and 4 to 5 P.M. For f/5.6, U. S. No. 2, give half. From 9 to 11 A.M. and 1 to 3 P.M. increase the exposure one-third.

SUBJECTS	PLATES (List on Opposite Page)											
	Class ½	Class 1	Class 1¼	Class 1½	Class 2	Class 2½	Class 4	Class 5	Class 6	Class 8	Class 12	Class 100
Studies of sky and fleecy clouds; open snow-scenes without foreground ...	1/1024	1/512	1/400	1/320	1/256	1/200	1/128	1/100	1/80	1/64	1/40	1/5
Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; winter-scenes having very light snow-covered foregrounds	1/512	1/256	1/200	1/160	1/128	1/100	1/64	1/50	1/40	1/32	1/20	2/5
Open landscapes without foreground; open beach, harbor and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; average snow-scenes	1/256	1/128	1/100	1/80	1/64	1/50	1/32	1/25	1/20	1/16	1/10	4/5
Average landscapes with light foreground; river-scenes; figure-studies in the open; light-colored buildings and monuments; wet street-scenes; snow-scenes with excessive contrast	1/128	1/64	1/50	1/40	1/32	1/25	1/16	1/12	1/10	1/8	1/5	1 3/5
Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away	1/64	1/32	1/25	1/20	1/16	1/12	1/8	1/6	1/5	1/4	2/5	3 1/5
Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red brick buildings and other dark objects; groups outdoors	1/32	1/16	1/12	1/10	1/8	1/6	1/4	1/3	2/5	1/2	4/5	6 2/5
Portraits outdoors in the shade; very dark near objects	1/16	1/8	1/6	1/5	1/4	1/3	1/2	2/3	4/5	1	1 3/5	13
Badly-lighted river-banks, ravines, glades and under the trees	1/8	1/4	1/3	2/5	1/2	2/3	1	1 1/3	1 3/5	2	3 1/5	26
Average indoor portraits in well-lighted room, light surroundings, big window and white reflector	3/8	3/4	1	1 1/5	1 1/2	2	3	4	4 4/5	6	10	77

In order to make the exposures as accurate as possible after the final multiplications, all fractions accompanying whole numbers have been allowed to remain in this table, except when the whole numbers were so large that fractions might be disregarded as negligible. In such cases approximate figures have been given. Shutters will not always give the exact exposure required, but the nearest speed may be used if it is approximately correct. When the nearest speed is too short open the diaphragm a little; when too long, close it a little. Let the exposure be a little too long rather than too short, and the more contrast there is in the subject the more it may be over-timed. Over-exposure, unless excessive, can be controlled in development, but under-exposure will not give a satisfactory negative.

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OUR ILLUSTRATIONS

Our custom of giving complete data about the photographs reproduced in Photo-Era is proving so popular, especially among beginners who wish to benefit by the practical experiences of those more proficient in camera work, that we shall, hereafter, maintain this feature as a regular department. In it, to simplify matters, will also be treated the prize-winning prints in the monthly competitions of The Round Robin Guild.

Our frontispiece this month is a portrait of Bertha Cushing Child, the eminent Boston vocalist, especially successful in the interpretation of classical music. The photographer, J. H. Garo, has succeeded admirably in expressing the refinement of his subject's artistic nature. The picture also serves to stamp its author as a powerful interpreter of human character and a master of composition and technique. This portrait is one of the finest examples of Mr. Garo's genius, and illustrates the fact that a work of art results when artist and sitter are in harmony with each other. Data: August, 4 P.M.; Goerz Celor lens, Series I b, No. 8, f/5.5, 19-inch focus; open stop; Seed 27 plate; 1 second exposure; pyro-soda developer; 8 x 10 platinum print.

"In the Fog," by Harriet Lynam, although not so pleasing as her print in Photo-Era last October, is good in atmospheric quality. The swan is a little too centrally located, and the position of its neck unfortunate, but the whole picture possesses the charm of simplicity and an unobtrusive background. Data: 8 A.M.; sun through fog; Goerz Dagor lens; stop 8; 1/25 second exposure; Kodak N. C. film; pyro developer; W. D. platinum print.

Spontaneous and original in its conception is "Peek-a-boo," by Mrs. W. W. Pearce. No woman has been more successful in photographing children than she, and it is largely because she knows her little models must not be posed if they are to be natural and free from self-consciousness. Art-composition is not often possible in this work, but the pictures ring true, and that, in this particular case, is, after all, of most importance. Data: July, 11 A.M.; bright sunshine; Cooke lens, Series III, 8½-inch focus; f/6.5; 1/100 second exposure; Ilford plate; metol-hydro developer. The negative was made with a 5 x 7 Graflex camera. From it an enlarged negative was taken and printed on Italian green carbon.

"Solitude" is a well-named and successfully-executed snow landscape by Hermann Linck. The composition is bold, and the lines are such as to give a variety of spacing. Snow texture and the dull sky of late afternoon are well rendered and show the value of using a color-filter. Data: January, 4.30 P.M.; no sun; Goerz anastigmat, 12-inch focus, f/48; 15 seconds exposure with light yellow filter; Isolar orthochromatic plate; pyro developer; carbon print.

One of the most charming photographs of Niagara Falls which has come to our attention is that by George Vieweger. The delicate clouds of the original are not done justice in the reproduction. Data: September, 9.30 A.M.; Zeiss Universal lens, 6-inch focus; stop f/11, with Voigtländer Alpha color-filter (2 times); 1/25 second exposure; Agfa-Chromo plate; pyro-acetone developer; Cyko Professional Semi-Matt print.

A print which shows the possibilities of meagre material even in late autumn is "Reflections," by E. T. Wood. The spacing is attractive and the softness of focus distinctly pleasing. Data: November, 11 A.M.; light haze; 1/5 second exposure at f/16.

"Childhood" is the title of a cute little semi-nude by Charles W. Jerome. The innocence of childhood renders the nude in such a subject admissible and attractive even to those who ordinarily object to it. The shadow-side of the face in this print is, we think, a little too dark. Data: March, 11 A.M.; fairly strong light; Goerz Dagor lens, 16½-inch focus, stop 4; 2/5 second exposure; Seed 26X plate; weak pyro developer; Anglo Sepia platinum print.

Portraits by W. M. Hollinger, especially those of men, are always distinctive characterizations. His "Portrait of David Bispham," the noted vocalist, is no exception — it is a speaking likeness. The lighting is excellent, and the head well placed in the space. Interest might have been concentrated upon the face by keeping down the values of collar and vest, but this is a minor criticism. Very little data is available about this picture, except that it was made with a Usener lens, 16-inch focus, on a Hammer plate. A pyro developer was used and the print is on sepia platinum.

George G. McLean seems to specialize in photographing flowers. He may do other work with the camera, but we have not seen it. The present arrangement is intended for page decoration, and answers its purpose admirably. The relative values and gradations are well rendered, and credit, it seems, is due to a Cramer Medium Iso plate. This was developed in a metol-hydro solution after an exposure of thirty seconds indoors with the lens working at f/64.

Cheerful small children before the camera are hard to find, but F. H. Richardson's "Ruth" seems to enjoy the fun. The posing, if posing it be, is superb, and the lighting soft and harmonious — a successful portrait decidedly to the credit of its maker. Data: 11.30 A.M.; good light, screened by one thickness of cheese-cloth; Nehring R. Portrait lens, 12½-inch focus, f/32;

½ second exposure; metol-hydro developer; Iris print.

In the portrait of President Taft by George G. Rockwood we have a likeness which is a direct opposite to the pictures which illustrate his well-known humor and good nature. From these one would not suppose that our new president is a man of strong and independent character and endowed with uncommon mental gifts. This fact, however, has been brought out very strongly in this picture by Mr. Rockwood. Data: December, 11.30 A.M.; good light, but sky slightly overcast; Goerz lens, Series III., No. 8, 19-inch focus, used wide open; 5 seconds exposure; Standard Imperial plate; adurol development in a tank; Azo print for reproduction.

Another winter-scene by Hermann Linck, more attractive but showing characteristics like the first, is "Winter Evening." The lines and spacing are good, and the decorative value of trees well placed is seen to advantage. Data: January, toward evening; no sun; Goerz anastigmat, 12-inch focus, f/48; light yellow filter; 12 seconds exposure; Isolar orthochromatic plate; pyro developer; carbon print.

Paul R. Morrison gives us a character study of "The Nun" which is remarkable if for no reason other than the beautiful treatment of values. The ordinary worker would have had a glaring white-paper high-light in a picture of this sort; yet painters never paint as pure white that which really is so, and why should the photographer allow such a defect to destroy all harmony and delicacy of tone? Here is the effect of white without its objectionable qualities, and it is produced by the juxtaposition of light and dark masses. In this subject the would-be pictorial portraitist will find an object-lessson worth his while to follow. Aside from this matter, the model is well chosen for the purpose, and the pose is one which admirably portrays the spirit of self-abnegation. Data: January, by the light of a large window screened with paper cambric; 11 A.M.; bright light outside; portrait lens at f/5; 3 seconds exposure; Standard Imperial plate; pyro developer; sepia platinum printed through two pieces of celluloid; mounted with two harmonizing shades of cover-paper.

"A Meadow Pool," by F. F. Sornberger, has all the quiet beauty of a water-color, and contains just the sort of material a painter would choose. All of Mr. Sornberger's prints show a keen appreciation of nature in all its varying moods. Data: June, 4 P.M.; hazy sun; Goerz lens, Series III, rear combination only, 11-inch focus, f/16; ½ second exposure; Hammer plate; rodinal developer; platinum print.

Harry M. Hope gives us a landscape, called "The Lake Shore," which has been much admired for its charm of locality and soft tonal qualities. It certainly is beautiful, and makes one long for the summer days to come. The left-hand shore-line is charming in its curves, and the accents of sunlight in the background are successful in giving distance and "snap" to the picture. As a composition it contains a defect, not objectionable to some, which is rather common in landscapes; viz., the horizontal shore-line and the vertical line of one of the trees and its reflection divide the space into four practically equal portions. This is unfortunate, for, as Alon Bement so ably pointed out in the December issue, variety in the shape of masses is a quality to be striven for. Data: 10 A.M.; sunlight; single achromatic lens, 12-inch focus, f/11; ½ second exposure; Stanley plate; metol-hydro developer; platinum print.

The first-prize print in the "Reflections" contest of The Round Robin Guild, "A Hazy Autumn Morn," by George Alexander, is not done justice in the reproduction — it is too delicate and subtle. The original is an 8 x 11 print of exceptional beauty, and possesses atmospheric qualities of a high order. Our engraver made several conscientious attempts to preserve its qualities in a full-page plate, but the attempt proved fruitless, and it became necessary to reduce it to small size in order to use it at all. Data: September, 9 A.M.; sun breaking through the haze; Standard Orthonon plate, 1/25 second exposure at f/11; pyro developer; bromide enlargement.

We regret that the second-prize print, by Paul Fournier, was not suited to reproduction and that it was impossible to secure another in time for this issue. The subject was most unusual, and skilfully handled. It represented a swimmer crouched on a stump at the edge of a pool, just preparing for a dive. The nude was here justified, and its commendable treatment and originality made it doubly acceptable.

Characterized by its simple boldness and the fascination of its reflections is "On Quiet Waters," by George H. Scheer, M.D. Of the many similar efforts we think this is the best we have seen, and believe it well worthy of the third Guild prize. Data: September, 11 A.M.; hazy but bright light; R. R. lens, 5½-inch focus, f/8, wide open; 1/10 second exposure; Cramer Inst. Iso plate; pyro developer in tank; enlargement from 3¼ x 4¼ on Monox bromide.

"Officers of the P. A. of A.," by J. E. Mock. Data: January, 2 P.M.; light very poor; Wollensak Royal Portrait lens, 16-inch focus, stop f/4; exposure, 4 to 5 seconds; Seed 27 plate; print on Azo developing-paper; regular metol-hydro developer. The men are grouped easily and naturally, conforming admirably to the arch form of composition. It may be urged that the management of the subject is symmetrical; but then the works of most of the old masters are thus individualized. The eager, concentrated attention of Mr. Mock's group is also worthy of commendation.

Rob a magazine of its attractiveness to the reader and you kill it as a producer of sales for the advertiser. PHOTO-ERA *has never been so treated, therefore all concerned are satisfied. We congratulate everybody — including ourselves.*

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Conducted by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department Address all such communications to Phil M. Riley, 383 Boylston Street, Boston

THE THAMES COLOR-PLATE

THE latest practical development in one-exposure color-photography is the new screen-plate known as the Thames, which is now obtainable on the English market. It is much like the Lumière Autochrome in conception and treatment, except that the color-screen and sensitive emulsion are on separate plates which must be bound in register after development, and, also, that the colors, instead of being scattered at random, are arranged in a predetermined pattern which gives exact proportions of each. Exposure is, of course, made through the color-screen, and the finished positive must, likewise, be viewed through it. This screen has the three primaries, red-orange, green and blue-violet, arranged upon it so that the first two named take the form of circles — the green a trifle larger than the red — and blue fills the interstices. Treating the wider interstice between the red and green circles, for the purpose of counting, as a circle, it will be found that the number of color-patches is 67,500 to the square inch. The plate used is of the ordinary panchromatic variety, although specially made for the purpose.

In loading the plate-holder, a black card is first inserted, then the plate — film side up — and above that the color-screen — glass side up. In this way screen and emulsion are brought into contact. Exposure is made through a special filter and the speed is greater than that of Autochromes. Several experimenters claim that the difference is from four to eight times; but it will be impossible definitely to determine this until the filters and screens are standardized by the manufacturers. In this connection it may be said that there is opportunity for improvement along these as well as other lines, just as there was in the case of the first Autochromes; but there seems to be a good basis to work upon and, like Messrs. Lumière, the makers will, doubtless, make further improvements in the way of uniformity of results and standardizing of material as soon as possible.

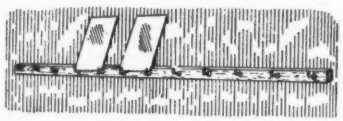
After exposure the plate is developed, reversed, redeveloped, fixed and washed much like the Autochrome. Intensification and varnishing, however, are not necessary. The resulting negative looks much like any, but when put in register with the color-screen again the image is shown in natural colors. The matter of registration is one which requires patience, but is not very difficult. At present, the chief trouble seems to be that the color-screens are not yet sufficiently uniform to make perfect registration in all parts of the plate possible; but this shortcoming will, doubtless, be avoided with improved methods of manufacture. Scratched-in cross-marks are provided on the screens as an aid to registration, but until there is more uniformity of grain it is more satisfactory to work wholly by trial and inspection.

As has already been intimated, no standard light-filter has been adopted. Color-rendering seems to be in the main truthful, although some workers complain of not securing good purple or pure yellow, but indirectly both have been seen when not wanted, as a result of incorrect registration. Deep reds are uncertain, although many plates show too much red or too much blue. A good range of blues is secured from green-blue through ultramarine to indigo, and also fair reds from orange through vermilion to crimson. Grays and greens tend toward blue, but the browns are very good. All these variations, however, seem to point to the fact that success depends upon correct exposure and accuracy in the manufacture of the screens. The finished transparencies, being rather denser than Autochromes, are best viewed by artificial light, which is a further advantage in that it supplies a little yellow, which seems to be slightly deficient in the screen.

In conclusion, it may be said that, if this process is properly worked out and improved, there is every indication that it may be an important one commercially. It has a few natural characteristics which do much to recommend it. Among them may be mentioned the fact that an error of judgment in exposure wastes only the sensitive plate, the color-screen being unharmed and suitable for further use. Then, too, the emulsion of the sensitive plate, being an ordinary gelatine one, without an accompanying color-screen, and being thicker than an Autochrome, allows more latitude in exposure and finishing.

A RACK FOR DRYING NEGATIVES

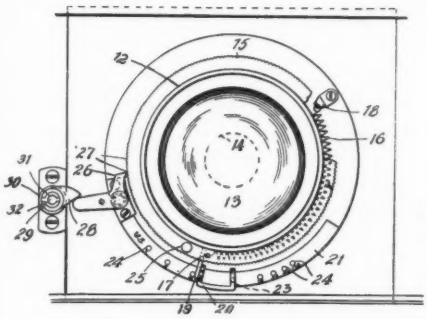
THE cut below supplies practically all the information necessary about the drying-rack suggested by W. J. Horner in a recent issue of *Photography and Focus*. The requisites are a strip of wood to fasten to the wall of the dark-room and a few screw-hooks. This method of drying is of advantage because it utilizes what is usually waste space, and also because the rack may be placed high up on the wall, where the negatives are out of danger of accident.



PHOTOGRAPHIC PATENTS

Abstracted by PHIL M. RILEY

Printed copies of patents are furnished by the United States Patent Office for five cents each Address The Commissioner of Patents, Washington, D. C.



December 22, 1908

907,486. DIAPHRAGM-CONTROLLER FOR CAMERAS. DORR E. FELT, Chicago, Ill.

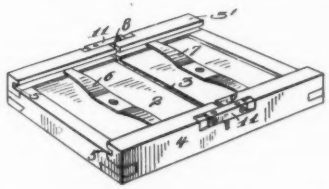
In cameras of the mirror reflecting-type a focusing-device is provided whereby the image is seen up to the time of exposure. A large aperture in the lens is desirable to give sufficient illumination for careful focusing, but frequently a much reduced aperture is necessary to secure sufficient definition in the photograph. The present invention relates to a mechanism which automatically changes the aperture as desired at the time of exposure. A coiled spring 16 has its opposite ends secured to a stud 17 in the rotary diaphragm-ring 15 and to a stationary stud 18 in the lens-mount, the tendency of the spring being to rotate the ring and reduce the size of the lens-aperture. The amount of rotation is predetermined by a stud 19 on the diaphragm-ring, which engages a movable clip 20, which may be set for any value of the lens. While focusing, the diaphragm is held open against the spring-tension by setting the ratchet 27. This is released by the cam 28, which is connected by a shaft and other suitable mechanism with the shutter-release, so that one pressure of the hand adjusts the diaphragm by the time the complete raising of the reflecting-mirror trips the focal plane shutter and makes the exposure.

907,515. MAGAZINE DEVELOPING-CAMERA. LOUIS MANDEL, Chicago, Ill.

A camera for carrying a plurality of very small sensitized plates and means for developing them as fast as they are exposed. The instrument is much like those now in use for taking dime portraits at beach and other resorts, except for improved interior mechanism for handling the plates.

907,592. PHOTOGRAPHIC PRINTING-FRAME. JOSEPH GODDARD, Rochester, N. Y. Assignor to Seneca Camera Mfg. Co., Rochester, N. Y.

By means of slots, 8 and 9, through both side-members of the printing-frame, into which the pintle of the hinge 3

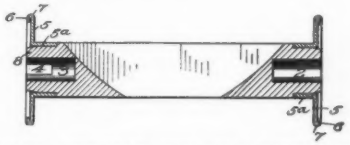


may project, all longitudinal shifting is prevented which would tend to destroy registration of the negative and partially printed sensitive paper when examined frequently. The countersunk metal cleats 11 strengthen the partially severed side-members.

December 29, 1908

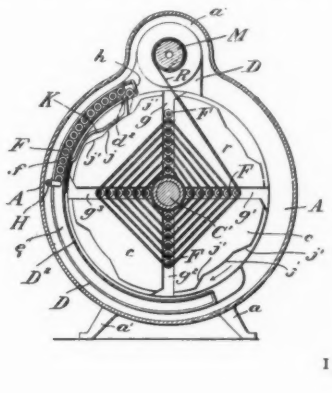
907,796. FILM-SPOOL FOR CAMERAS. JAMES H. HASTE, Rochester, N. Y. Assignor to Eastman Kodak Co., Rochester, N. Y.

The novel feature of this patent consists of the metal end-flanges of the film-spool, which are turned outwardly back upon themselves to provide a curved edge which will not cut the side of the spool-holder.



907,890. PHOTOGRAPHIC FILM DEVELOPING-MACHINE. EDWIN A. RUTENBER, Logansport, Ind.

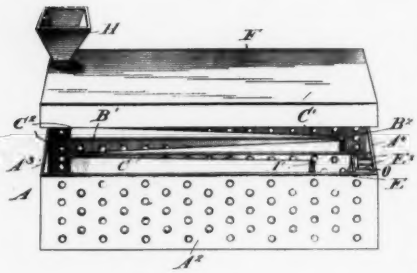
A device for daylight development and fixation of roll-film by means of rotation in the solutions. The principle is similar to that of the Kodak Developing-Machine, but the

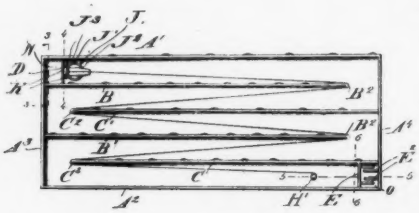


details are worked out in a very different manner. The apparatus consists of a tank within which is a revolving reel onto which the film is wound from the spool M. The flanges of the reel are slotted to receive spacing-rods F, serving to keep the coils of film apart, which are fed by gravity from a spring-actuated magazine. The cross-section shows the arrangement of the rods when the film is partly wound onto the reel. The ends of the tank are vertical, and one of them is in the form of a removable liquid-tight door, to which the whole interior mechanism is attached so that it can be removed from the tank A. Solutions are admitted through a spout in one end.

907,942. DEVELOPING, WASHING AND FIXING-BOX. W. F. Zierath, Sheboygan, Wis.

The tank and partitions are made of metal having indentations and projections in their sides to hold the film away and allow free circulation of solutions. A light-tight inlet is provided below the spout H and also an outlet at the diagonally opposite corner. The film is drawn around the





partitions in the manner shown. The developer or fixing-bath enters on each side of the film through perforations in the receptacle N, passes around the partition and out through the receptacle O. As there is free flow through the box, it may be used for washing after the developer and fixing-bath have been successively poured off.

908,017. PRODUCTION OF ARTISTIC DESIGNS OF PICTURES. Émile Laporte, Friebourg, Switzerland.

It is the purpose of this invention to provide a method of producing photo-engraved copper and zinc plates and lithographic stones for printing pictures imitating the effect of etchings without the services of an engraver to cut away the excess metal. Sheets of celluloid or a transparent gelatinous substance are first given a grain, coarse or fine as desired, in order that the design may be traced upon them with pencil, charcoal or ink. This is done by specially prepared rollers. On this surface the artist draws his picture, the grain serving as a tooth to his pencil and giving the sketchy effect of drawing-paper. It now becomes necessary to fix the crayon, whatever it may be, causing it to adhere to the celluloid and also to restore the primitive transparency of the celluloid, lost in the rolling-process, in order that light may pass through it. This is done by immersion in a bath of acetone or alcohol, after which printing-plates are prepared from this design in the ordinary way.

908,036. PHOTOGRAPH CABINET. Rudolph H. Ripking, Aurora, Ind.

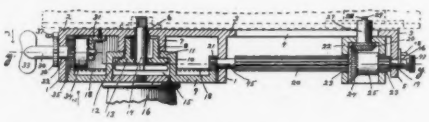
An attractive table-like piece of furniture with doors on its four sides hinged at the bottom so that they may be turned down, giving access to an album of sample photographs fastened to its inner side. By this means a great many photographs may be kept in small space.

908,064. APPARATUS FOR PHOTOGRAPHERS' USE. William Becker, Chicago, Ill.

A portable dark-room, provided with a ruby window and armholes, not greatly different from those already in use. Its chief advantage is that it folds into very compact form when not in use.

908,091. PANORAMIC ATTACHMENT FOR CAMERAS. F. F. Groff, Lancaster, Penn.

By means of this pocket device any size of film-camera is converted into a panoramic outfit. It is attached between the camera and tripod-head, as shown in section, and by means of the spring motor 34 is adapted to revolve the cam-



era partly or completely upon a vertical axis and supporting-plate 9, the teeth of which engage the drive-gear of the motor 35 and a pinion 21. This pinion rotates a shaft 20, the bevel gears 24 and 26 and the post 27 terminating in the lug 28, which enters the bottom of the camera and engages a slot 29 in the bottom of the film-spool, thus unrolling the film as the camera revolves. The extending arm 3 is slotted at 4 so that the gear-case 22 may be moved along the toothed shaft 20 to conform to any size of camera. Suitable starting and stopping-means are provided, so that the arc of the circle to be traversed may be predetermined.

908,196. PHOTOGRAPHER'S FLASH-LAMP. Paul Bauer and Richard Vilim, Chicago, Ill.

A compact and ingenious adaptation of the familiar alcohol vapor and platinum wire cigar-lighter. The lighter forms the upper end of a cylindrical tube, while the lower provides a reservoir for flash-compound and storage space for the firing-chamber, which is inserted above the lighter for use. In the floor of this chamber are three small holes through which the flame ignites the powder upon the falling of a protecting shield below, operated by an easily removable peg.

908,355. PHOTOGRAPHIC SHUTTER. WILLIAM TAYLOR, Leicester, England.

A shutter for giving time or instantaneous exposures of different lengths by varying the time during which the shutter remains fully open. A spring separate from the motor-spring is used to operate the timing-device, and the tension of this spring may be adjusted so as to give a definite exposure for a given amount of movement of the pneumatic piston timing-device. At the same time the piston is relieved of the shock due to arresting the motion of the shutter; and its motion being controlled more by leakage of air and less by its elastic action, accurate timing of short intervals is thereby improved. The four leaves of the shutter form the diaphragm of the lens, the size of which is governed by a setting-device which limits the extent of motion.

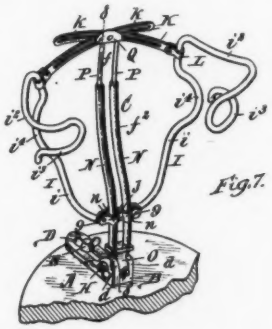
January 5, 1909

908,531. FILM-PACK HOLDER. ALBERT H. WRIGHT, Quincy, Mass.

A design for simple kits to fit the largest size of Film-Pack holder, by means of which packs of smaller size may be used. The smaller packs are brought into the same focal plane as the larger ones, and are so placed in the holder that individual films can be removed the same as those of the larger packs.

908,800. PHOTOGRAPHIC POSING-DEVICE. FREDERICK W. C. POHLE, Buffalo, N. Y. Assignor to Pohle-Werner Mfg. Co., Buffalo, N. Y.

This patent covers improvements in the invisible baby-holder. The cut shows without further description its various adjustments by means of which it may be made to conform to the back of the child and furnish a comfortable support without cramping or pressing. The curved rods 12 are intended to rest below the arm-pits of the child and furnish support for a considerable portion of the body.

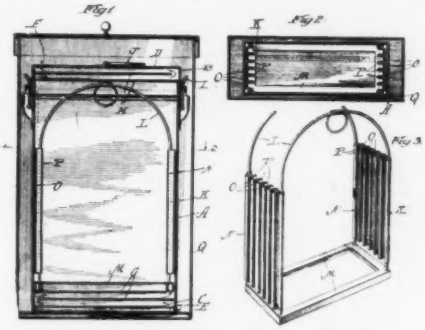


908,892. PHOTOGRAPHER'S DARK-ROOM. VICTOR SEKINGER, Jeannette, Penn.

A portable cabinet dark-room provided with a ruby-lamp, observation-window and armholes, similar to apparatus of this sort now in use. Compactness is its chief feature, accomplished by the fact that it is constructed in the form of two box-like members which telescope one within the other when not in use.

909,090. PHOTOGRAPHIC DEVELOPING-APPARATUS. DAVID JAMES, Chicago, Ill.

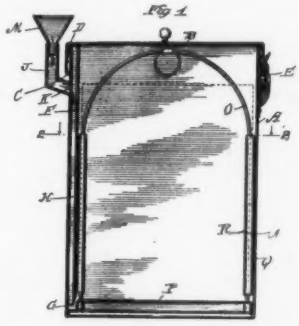
The cut shows the apparatus to be a light-proof tank for developing glass plates. It consists of a rack K which carries the plates in pairs back to back for economy of space and solution. The rack fits into a receptacle A having openings E and F to admit liquid, which must take a zigzag course around the staggered plates forming the light-proof top and bottom. Its two parts are fastened together by latches I, and the whole is then placed into the receptacle Q, which contains the developer. Afterwards A is removed and dipped in water several times to rinse the plates. The fixing-bath



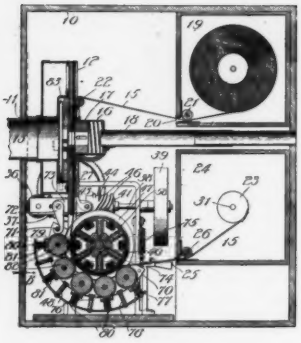
is now substituted in Q and A is reinstated and allowed to remain for a proper time, after which the bath is poured off and the whole outfit placed under a faucet to wash the negatives. From start to finish it is not necessary to handle the plates.

909,091. PHOTOGRAPHIC DEVELOPING-APPARATUS. DAVID JAMES, Chicago, Ill.

This tank is much like the one just described, but, being itself a container of liquid, only one receptacle is required.



The solutions must enter through the long passage H, so no light is admitted and the hinged cover is also made light-proof. The plate-rack is the same as for the other tank. By using a changing-bag and either one of these tanks no dark-room is needed.



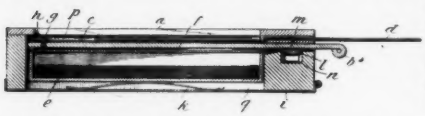
January 12, 1909

909,404. MOVING-PICTURE MACHINE. ADOLPH F. HAMACEK, Chicago, Ill.

Reference to the sectional diagram shows that the chief feature of the apparatus is a friction-feed device which does away with the necessity for perforations in the film, which cause jerking of the film and consequent jar of the image, as well as wearing and even tearing of the film as the driving-prockets are withdrawn from the perforations. A worm-gear 46, suitably connected with the operating-crank, drives the wheel 47, around which the film passes as shown, being held against it by the spring-pressed rollers 82.

909,459. DEVICE FOR EXPOSING LIGHT-SENSITIVE LAYER-CARRIERS. JOSEPH SCHMUCK STEGLITZ. Assignor to Optische Anstalt C. P. Goerz Actiengesellchaft, Friedenau, Germany.

This piece of apparatus, shown in section, consists of a box somewhat like a plate-holder and having an exposure-opening at *a*. The hinged door *i* gives access to the box and



through it the receptacle for holding exposed films *e* is inserted with the pins *g* on its shutter-slide *f*, extending into the holes *h* of the change-slide *b* and held in place by the pring *k*. The film *c*, enclosed in a light-proof envelope *d*, is inserted above the change-slide, the envelope is drawn off and the exposure is made. The change-slide is then withdrawn, carrying the shutter-slide *f* with it, so that the film can fall into the receptacle *e*, after which the slides are closed and another film inserted above as before. The slides are made light-tight the same as any plate-holder. The receptacle *e* can be removed and replaced by another in daylight.

909,543. ADJUSTABLE FILM-ROLL HOLDER. WILLIAM J. BREMAN, Washington, D. C.

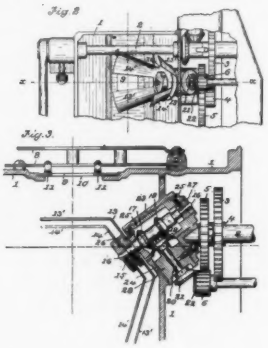
This device makes it convenient to print films from the strip without cutting into sections. An ordinary printing-frame corresponding to the largest size film in use is employed, and, as the holding-device is adjustable, any smaller width may be used. Similar holders are provided at each end of the printing-frame, one for the carrying and the other for the receiving-spool. These are prevented from accidentally revolving by serrations in the spool-flange which engage a stationary spring-tongue, that the film may be stretched tightly across the frame between them. Thumb-screws, which engage the usual slotted ends of the film-spools, are provided with which to turn any desired negative into position.

909,639. PHOTOGRAPHIC PRINTING-FRAME. JAMES C. MORGAN, Ripley, W. Va.

This frame is designed chiefly for printing single images from a plate on which several negatives have been made, as is sometimes done in portrait work. Four images on one plate is the common custom. Three of the images are, therefore, blocked out by a removable shutter made in two parts, one of which covers half the whole plate; the other, one-quarter. These have light-tight flanged edges and are fastened into the frame in front of the negative by means o pivot-latches. By varying the position of this shutter any one of the four images may be left exposed behind the opening, or, if desired, half of the whole plate may be exposed at once. Another feature of the frame is a spring-actuated strip which holds the negative firmly in position just as a plate is held in the ordinary plate-holder.

909,677. SHUTTER MECHANISM. ALVAH C. ROEBUCK, Chicago, Ill.

A duplex light-controlling shutter for intermittent-feed type of kinetoscopes, by means of which the opening and closing of the light-aperture is effected across its narrowest width and in a plane parallel to the aperture, whereby greatly decreasing the period of non-exposure. Reference to the Fig. 2, a detail front elevation, and Fig. 3, a horizontal section, shows the light-opening 9, behind which the shutter-blades 13 and 14, of the truncated cone form, revolve in opposite directions so as to close the aperture from top to bottom at the same time. In this way but little light is los in the closing of the shutter preparatory to the moving of the film, and there is but little flicker. The shutter-blades revolve around a common axis, the member 13 being carried by a tubular shaft 15, within which is a central shaft 1 carrying the member 14. These are operated by the bevel gears 17 and 18, which are driven by suitable gearing from the main operating-shaft of the kinetoscope 2.



NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

THE PHOTOGRAPHIC CLUB OF BALTIMORE

FOURTH ANNUAL PRIZE-PRINT COMPETITION

EXHIBITION will open March 16, 1909.

All prints must be entered by March 2, 1909, and must be entered in one of the following classes; namely first class, Landscape and Marine; second class, Genre and Portraits; third class, Miscellaneous.

Members are limited to six prints, mounted, but not framed, in each class. As there will be no jury of admission, all prints as above allowed will be hung.

One Gold, one Silver, and one Bronze Medal will be awarded in each class, provided there are six or more exhibitors in the class. If there are four or five exhibitors only two medals will be awarded; if three or less exhibitors, one medal. The judges, who shall not be members of this club, are to decide what grade of medal or medals shall be awarded, and whether the exhibit in any one class is up to high enough standard to award *any* medal.

Members who received medals in last year's competition will be eligible to receive only a medal of higher grade in such class or classes in which they have been recompensed.

One Gold Medal of Honor shall be awarded to the best print in the exhibition, for which all members are eligible, but the recipient shall not receive in addition to this the first prize in its class. This shall go to the next best picture in the class.

Prints of members who have been previously medaled will be marked "Medaled," with the date and grade of the medal.

CAMERA CLUB OF NEW YORK

IT was the good fortune of the editor to attend the lecture on Spain by Frank Scott Gerrish, a member of the club, on the evening of January 8. The lantern-views, especially those depicting the wonders of the Alhambra, were remarkable for the truth and beauty of coloring, and the entertainment gave intense pleasure to the assembled guests — about one hundred and fifty in number. The walls of the handsome and spacious auditorium — exhibition-hall — were graced by numerous photographic views of Mount Wilson and the surrounding country taken by Professor Ferdinand Ellerman, of the Carnegie Institute of Washington, which were viewed with interest after the conclusion of the lecture. The members present then guided their guests through the club's magnificent quarters, which for convenience and attractiveness, utility and completeness, challenge admiration and may be regarded as unmatched by any photographic society in existence. On January 15 a lecture, "Our Wild Neighbors," was given by Mr. Ernest Harold Baynes, illustrated with one hundred lantern-views made from negatives by the lecturer. In appreciation of Mr. Baynes's reputation as a photographer and lecturer, a large audience was in attendance and fully enjoyed the superb entertainment. Thus it will be seen that the New York Club is decidedly in the running, and that its policy to supply strictly high-class lectures, and at frequent intervals, to its members and friends should be emulated by other photographic clubs.

ANNUAL DINNER OF THE P. A. OF N. E.

THE annual love-feast of this body took place on the evening of January 28, in the banquet hall of the Café Louis, Boston. The committee had hoped to take advantage of the presence in town of many members who had come from a distance to attend the Eastman School of Professional Photography, held in this city January 26 to 28. Unfortunately, many of these visitors from afar had made other arrangements previous to coming to Boston, and others were beguiled into visiting theaters and other places of amusement. For these reasons, the participants in the banquet numbered only fifty; but it was an assembly of sufficient size to have a good time and to enjoy the most savory dinner ever served on these occasions. The repast was a work of art, in its way, and was fully enjoyed by every one. Mr. Arthur A. Glines, the veteran photographer, was chairman, and he appointed the honest and eloquent Hon. S. M. Holman, of Attleboro, Mass., as toastmaster. Among the speakers were second vice-president of the National Association, J. H. C. Evanoff; President William Webster and Secretary George H. Hastings of the New England Association; Orrin Champlain, manager of the Marceau Studio, Boston; J. S. Cummings and Milton Wade of the Eastman Kodak Co.; H. D. Haight of the Robey-French Co.; W. P. Edgar of *The Christian Science Monitor*, and Wilfred A. French, editor of PHOTO-ERA.

BENJAMIN W. KILBURN

THE above-named veteran photographer, one of the oldest and widest known makers of stereoscopic views, died at his home, Littleton, N. H., January 15. The firm of Kilburn Brothers was known throughout the world as the makers of very excellent stereoscopic views, especially of the White Mountain region, which, not so very many years ago, were to be found in company with the family Bible and photograph album in nearly every household throughout this country and Canada.

XUM

J. E. MOCK EXECUTIVE COMMITTEE P. A. OF A.

Right to left: Frank R. Barrows, president; G. W. Harris secretary; A. T. Proctor, first vice-president; J. H. C. Evanoff, second vice-president; L. A. Dozer, treasurer.

THE ROCHESTER CONVENTION OF P. A. OF A.

THE Executive Committee of the Photographers' Association of America met in executive session in Rochester, N. Y., Jan. 12, 1909, to prepare for the twenty-ninth annual convention to be held in that city, July 19, 20, 21, 22, 23 and 24 next. Among the important features adopted are the following:

A school of photography, with practical demonstrations by leading American photographers.

A day devoted to visiting the local photographic industrial establishments.

A general discussion regarding the suggested revision of the Constitution and By-Laws.

An award of $100 in cash for the best invention, process or appliance relating to photography which has not before been exhibited at a national convention.

A complimentary, non-competitive exhibition of photographs in which eminent amateurs will be invited to participate. Association-prizes are to be dispensed with entirely this year. This eliminates all danger of friction and petty jealousies that might otherwise result.

President Barrows's progressive policy was also evidenced by his appointment of a committee of three members of the National body, who purpose attending the International Photographic Exposition at Dresden, Germany, to represent, officially, the P. A. of A., at that meeting.

The Seneca, the finest hotel in Rochester, was chosen as official headquarters of the convention.

THE COMPLIMENTARY EXHIBIT

Prints intended for the pictorial display (complimentary exhibit) must not exceed six. No other restrictions. They must be sent, all express-charges prepaid, to A. T. Proctor, first vice-president, care of Convention Hall, Rochester, N. Y., to arrive there on or before July 10, 1909.

Applications for space to be made to A. T. Proctor, Huntington, W. Va.

Prints of any contributor who does not conform to these rules will not be accepted.

While the association will not be responsible for any loss of or damage to pictures in its charge, special precaution will be taken to ensure the safe return of all exhibits.

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No exhibit shall be removed from the hall until the convention is over, except with permission of A. T. Proctor, chairman of the Hanging Committee.

Every member of the Executive Committee was present (see group by J. E. Mock). The accounts of the treasurer and secretary were audited by Messrs. Dozer and Harris and found to be correct. The treasury is in excellent condition, the balance on hand, Jan. 1, 1909, being $4,698.74. It was suggested that each of the various organized bodies of professional photographers be invited to send one delegate to the Rochester Convention to propitiate the affiliation of the national and other photographic societies for the purpose of advancing their common interests. All inquiries in regard to the convention should be addressed to the secretary, G. W. Harris, Washington, D. C.

ELMIRA CAMERA CLUB

At a meeting of the Elmira Camera Club, Elmira, N. Y., held Jan. 7, 1909, the following-named officers were elected for 1909: H. T. Stagg, president; Prof. W. H. Davis, vice-president; W. E. Bryan, secretary and treasurer; F. Scharf, G. B. Nicewonger and H. E. Snyder, Board of Directors.

The club has shown considerable progress. Several important improvements have been made within the past year, such as a new print-display case at street-entrance to the club, also a portrait-camera with which several of the members have become quite proficient — due largely to the excellent lighting-facilities in the studio connected with the rooms. An enlarging-room has been added and considerable bromide enlarging has been done, particularly in photomicrography, in which several of the members are interested. The club is now installing a lantern for lantern-slides to be given in the rooms this winter.

CONVENTION OF THE O.-M. P. A.

State conventions are competing with each other as never before. Here is the Ohio-Michigan Photographers' Association announcing its sixth annual convention, March 23, 24 and 25, 1909, at Toledo, O., and offering inducements which nearly rival those presented by the National Association.

There will be expert demonstrations on portraiture by electric and flash-light; skilful retouching, etching and other work on negatives, and members are invited to bring one of their own negatives for illustration; practical talks on reception-room methods, business-questions, etc., by successful practitioners, and other useful and profitable features.

Medals will be awarded as prizes, including a Grand Prize — all open to members — and a Grand Portrait-Prize, *open to the world*. A $50 cash prize will be given for the best new and original invention or idea shown and demonstrated at this convention. The pictorial display will comprise work by eminent men throughout the United States, and include a full set of prints from the prize-winning negatives of E. E. Doty. Each member of the Executive Committee is bubbling over with enthusiasm, and there is every prospect that the event will be creditable in every way. The officers are E. G. Herrick, president; E. E. Doty, vice-president; E. B. Campbell, vice-president; Thos. Palethorpe, treasurer, and W. A. Triplett, secretary.

CONVENTION OF THE I.-M. P. A.

The Inter-Mountain Photographers' Association will hold its second annual convention at Salt Lake City, Utah, on April 5, 6, 7 and 8, 1909. The officers are L. F. Griffith, president; Leo Hafen, vice-president; F. H. Sturgis, vice-president, and F. E. Scott, secretary and treasurer.

THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES

This important institution of learning now occupies new and magnificent quarters in the Brooklyn Academy of Music Building, which has only recently been finished. The department of photography is located on the top floor, and occupies a suite of rooms which are commodious and completely equipped with up-to-date working-apparatus, technical rooms, lockers, etc. To celebrate the event, an opening exhibition of work by members was held January 11 to 16 — which consisted of prints representing the highest pictorial ability of the club. The printing-mediums included gum-bichromate, gum-platinum, platinums and bromides.

The regular annual exhibition will be held, as usual, in April, at the Art Rooms in Montague St., Brooklyn, N. Y.

BUFFALO SECTION NO. 6 OF THE P. P. S. OF NEW YORK

This active body of professional workers held a meeting Jan. 25, 1909, at the studio of Howard D. Beach, Buffalo, N. Y. There was a large attendance, among those present being Messrs. Bradley and Bliss, respectively president and vice-president of the State society; also, Messrs. MacDonald, Core, Colonel Marceau, of New York; Messrs. Mock, Saunders and Harscher, of Rochester; Messrs. Camp and Craven, of Jamestown, and many others; also, ladies of Buffalo members. A musical entertainment and refreshments were furnished; and Mr. Rohlfs spoke on art topics. The grand feature, however, was the usual print-exhibit, in which the work of Mock, Saunders, Harscher, Camp, Craven, Goldensky, Ellis, Phillips, Elliott, Garo, Parkinson, Strauss, Bradley, Falk, Hoyt, Marceau and MacDonald was shown. Much interest was manifested in Mr. MacDonald's print which was hung recently in the exhibition of the Royal Photographic Society, London.

XUM

THE RAMBLER'S PHOTOGRAPHIC PRIZE COMPETITION

THE first important prize contest of the year is announced by Thomas B. Jeffery & Co., manufacturers of the Rambler Automobile. For full particulars please consult their advertisement in this issue. The sum of $100 will be divided among the successful competitors, and it is a pleasure to state that the contest will be conducted in a manner worthy of the confidence of every participant.

It is the policy of PHOTO-ERA — inaugurated several years ago — to endorse or recommend no specialty, product or enterprise unless it merit absolute confidence, a procedure obviously not calculated to swell its advertising-pages. We are happy to state that the Rambler contest deserves to be favorably considered by every amateur desirous of winning a cash prize, the amount of the award being commensurate with the excellence and advertising value of the successful print. To ensure safe transportation the prints should be carefully enclosed between stiff, corrugated boards, with the ridges running in opposite directions, or in a safe and desirable mailing-device.

BOSTON CAMERA CLUB

AN important Interchange Exhibit at the club rooms early in January was that of the Photographic Society of Philadelphia. Several members of the organization were well represented, particularly C. Yarnall Abbott and Maurice T. Fleisher. Both had six prints of a decidedly original character. Among those by Mr. Abbott, the portrait of F. Holland Day, "The Swing," "The Dancer" and "Dawn"— a nude — were most noteworthy. Mr. Fleisher's "Japanese Landscape" and "In Old Canterbury" had the charm of the unusual and the pleasing pictorial quality typical of his work. Elias Goldensky showed a head of a young girl, which was a fine piece of portraiture, and E. H. Smith had to his credit a landscape well composed and full of atmospheric quality, entitled "A Misty Morning." Other important exhibitors were Walter Zimmerman, B. F. Haywood Shreve, Richard Witt, J. W. Nicholson, W. G. Littleton, R. T. Dooner and Wm. H. Castle.

Following the exhibit of the Philadelphia Society was that of the Photographic Club of Baltimore. Of the sixty prints shown several were of uncommonly high artistic quality, Dwight F. Boyden's winter-scene entitled "Snowshoe Tracks," in particular, and by far the best picture in the entire collection. It was very original in subject and beautifully composed, with the feeling of intense cold admirably interpreted. "The Coming Storm," by the same artist, was a very impressive picture, but did not seem quite to carry out the meaning of the title. A landscape (No. 52) entitled "Quiet Waters," by Charles A. Muller, was delightful in quality and composition. Mr. Muller, also, showed some pleasing genres. There were also some good portraits by R. L. Harris.

The annual meeting of the club was held Monday evening, January 4. The officers elected for 1909 are: president, Phineas Hubbard; vice-president, A. E. Fowler; secretary and librarian, J. H. Thurston; treasurer, C. H. Chandler. The Executive Committee consists of G. R. Fisher, C. F. Hildreth W. L. Manson, S. B. Read, F. A. Saunderson and W. H. Wing.

The club will open its annual exhibition March 1, and members intending to compete are asked to begin preparations now.

THE CRAMER PRIZE-CONTEST

THIS notable competition of G. Cramer Dry-Plate Company, for the best negatives made by amateurs on Isochromatic plates, was decided Jan. 26, 1909. The judges were C. B. Woodward, amateur and connected with the Woodward & Tiernan Printing Company, color-engravers; F. A. Raymer, photographic expert, and J. Ed. Rösch, eminent photographer and past president of the P. A. of A. The prizes were awarded as follows: 1st, $100, entry 5124, J. L. Hopper, Highland, N. Y.; 2d, $75, entry 18, H. W. Spooner, Gloucester, Mass.; 3d, $50, entry 8230, C. W. Mahneke, New York City; 4th, $25, entry 6138, F. R. Altwater, Newport, O.; special, $25, Mrs. Nancy Ford Cones, Loveland, O.; 5th to 14th, $5 worth of Isochromatic plates to 8216, M. J. Pope, Naugatuck, Conn.; 9292, H. E. Harnden, Phillips, Me.; 9313, Annie M. Sullivan, Oakland, Cal.; 2, T. W. Kilmer, M.D., New York City; 6209, A. Schweizer, New York City; 9339, Mrs. A. F. Foster, Wyoming, O.; 40, F. J. Riggs, Worcester, Mass.; 7160, W. S. Cable, Oak Park, Ill.; 5114, Z. Veren, New York City; 9344, G. H. Scheer, M.D., Sheboygan, Wis.

The company expresses its entire satisfaction with the verdict of the jury, the results of the contest and the great number of entries. We expect to reproduce in our next issue some of the successful prints, together with interesting details. This will afford our readers an opportunity to compare the results of an ordinary dry-plate with those of an Isochromatic plate.

CHICAGO CAMERA CLUB

IT is a healthy and welcome sign when rivalry exists between camera clubs. This condition is gratifying, although it cannot be denied that a few scattering clubs are dying for lack of energy and enterprise. Among the active of the large and progressive societies is the Chicago Camera Club. During the month of January it gave its members and friends four admirable entertainments, as follows: January 7, Toning Bromide Prints, by Mr. Geo. Alexander (various methods were demonstrated); January 14, Combination-Printing, by Mr. Geo. C. Elmberger (a simple and efficient method); January 21, exhibition of lantern-slides from the Wisconsin Camera Club were shown; January 28, Making Enlarged Negatives, by Geo. C. Elmberger.

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BOOK REVIEWS

COMPOSITION IN PORTRAITURE, by Sidney Allen. With one hundred and thirty-six illustrations and numerous diagrams. Price, $3.00, postpaid. Edward L. Wilson, New York.

There are many books on composition in general and portrait composition in painting, but there has long been need for a volume on the composition of the photographic portrait by one competent to handle the subject. In this respect the present treatise seems to fill all requirements; it is written in an interesting manner and its contents is thoroughly practical and helpful. Constant reference is made to the methods of eminent and successful photographers both here and abroad, while the important points in the text are illustrated by reproductions of famous photographs and paintings. Altogether, it is a work which should find a place in the library of every portraitist, professional or amateur.

SELF-INSTRUCTING LIBRARY OF PRACTICAL PHOTOGRAPHY. Edited by J. B. Schriever and Thomas H. Cummings. Half-leather binding, marble tops and sides. Prices and prospectus upon application. The American School of Art and Photography, Scranton.

Five of the eight volumes comprising this much-talked-of set of reference-books have been issued, and the other three will follow shortly. It is intended that the complete set shall cover practically the whole field of photographic picture-making, and the arrangement of matter is such as to form a logical and systematic series of graduated lessons for self-instruction. The style of the letter-press is simple and direct, so that all who read may understand, and is adapted alike to the needs of professionals, semi-professionals, expert amateurs and beginners who wish to know more of their art and to perfect themselves in it. Aside from the self-instructing feature, however, these volumes fill the need for a reference library containing reliable formulæ of all sorts, a list of difficulties likely to be encountered, preventives and remedies. This vast amount of data is based upon the actual experience of every department of the American School of Art and Photography in instructing thousands of students all over the world, and hence is of a thoroughly practical character and broad in its treatment of varied conditions. A full index is provided for each volume and, as the paragraphs are numbered, all this information is quickly available. The illustrations, of which there are many, are by the leading pictorialists of America and furnish excellent examples in art and technique for the student to follow.

Volume I is almost entirely for the beginner, treating nearly the whole subject of photography in an elementary way and employing many illustrations to show correct and incorrect methods of procedure and the results. This volume, like all the others, contains complete data regarding all the photographs reproduced.

Volume II is devoted to an exhaustive treatment of the methods of development and after-treatment, with diagrams, formulæ, tables, poisons and antidotes, etc.

Volume III covers the broad subject of general outdoor photography, with valuable sections on composition and the construction and use of the lens.

Volume IV takes up in detail the more commonly used methods of printing, with a chapter on mounting. Special attention is given to gaslight papers.

Volume V treats a variety of subjects, including home portraiture, flashlight, interiors, copying, enlarging and lantern-slides. Of the books to appear later, Volume VI covers studio portraiture and system; Volume VII, retouching, etching and modeling; Volume VIII, scientific, commercial and color-photography.

MR. EASTMAN'S MUNIFICENCE

SOME men of wealth are prone to be ostentatious in their dispensations of charity; others indulge this Christian virtue without a desire to attract attention. Thus we learned, wholly by accident, that George Eastman, head of the great corporation bearing his name, had recently contributed the sum of $400,000 to the City Hospital, Rochester, N. Y. When the announcement of the donation was made by a Rochester paper Mr. Eastman was on his way to Europe.

WYOMING VALLEY CAMERA CLUB

THIS club announces its eighth annual exhibition of pictorial photography to be held in May. All pictures must be received before April 17. Entry-blanks will be sent upon request by the secretary, Will D. Brodhun, 267 South Main St., Wilkes-Barre, Penn.

EASTMAN SCHOOL OF PHOTOGRAPHY

THIS traveling school of photographic education gave a series of public demonstrations at 34 and 36 Bromfield St., Boston, January 26 to 28, which afforded the photographers of New England a much-coveted opportunity to acquire practical and reliable information regarding the latest photographic processes. The attendance on each day was large and enthusiastic and the demonstrations were of the usually high technical character. They were conducted by various experts of the company, who treated such important subjects as lighting and posing by electric light, tank development, Nepera, Carbon Sepia and Ozobrome papers, Polychrome plates, bromide enlarging, negative-retouching and a series of printing-room dodges, devices and ideas with signal ability. The visitors were loud in their praises of these splendid opportunities for the practical improvement of their work and the manner of conducting their business.

A neat and tidy studio presages a neat and tidy photograph.

WITH THE TRADE

SENECA POCKET-CAMERA

THE Seneca Manufacturing Company, Rochester, N. Y., has recently put upon the market its Pocket Seneca No. 3-A camera, made principally for post-card work, the print measuring 3¼ x 5½. This very handy and practical camera is provided with an R. R. lens, automatic shutter, rack and pinion and rising and falling lens-front, listed at $14, besides being guaranteed by the makers.

A NEW ANSCO BRANCH

THE Ansco Company of Binghamton, N. Y., has recently opened an office at No. 171 Second St., San Francisco, Cal., where is carried a large and complete stock of Cyko Papers and Postal-cards in their various grades; also Ansco Films, Ansco Film-Cameras, Developers and other Ansco specialties. The company intends to give the very best service possible from this branch, and supply dealers throughout California, Arizona, Nevada and points intervening as far east as Salt Lake City.

This bit of news will doubtless be received with great pleasure by all of the independent dealers on the coast, and when taking into consideration that Woodard-Clarke & Co., Portland, Ore., and Gailey Supply Company, Seattle, Wash., will continue to act as distributers, the consumer will have little cause to complain in future about not getting Ansco products from near-by depots.

Mr. C. B. Stanbury, vice-president of the Ansco Company, will remain in charge there for some time, as it is his desire to get the branch thoroughly organized and established before returning East.

STANDARD CHEMICALS

AMONG the best known manufacturing-chemists in the United States is the Bowers-Weightman-Rosengarten Company, of Philadelphia. This firm is also one of the oldest — perhaps the oldest in its line — in this country, having been established in 1818. It has been long and favorably known for the excellence and purity of its products, which, even to-day, represent the highest possible standard. This fact is most thoroughly appreciated by the photographer, who esteems the firm's nitrate of silver, chloride of gold and all other important chemicals necessary in his profession, knowing the danger of using cheap, inferior chemicals, and that the best are none too good.

DIFFUSION AND ATMOSPHERE WITH PORTRAIT-LENSES

ONE of the claims made in behalf of the little f/5 portrait-lens, made by the Standard Optical Company, of Newark, N. J., is artistic diffusion and atmosphere, which characterizes the modern, up-to-date portrait-lens. Portraitists interested should send to the above-named firm for a price-list. The manufacturers will also send the lens on trial to responsible persons.

PORTRAIT OF PRESIDENT TAFT

PHOTO-ERA is probably the first magazine to publish a portrait of our new president in which, appropriately enough, an expression of power, dignity and intellectual force replaces the familiar look of mirth and bonhomie which marked the campaign-portrait.

The honor of producing this splendid likeness belongs to George G. Rockwood, the veteran photographer of New York. He employed for this purpose a No. 8 series III, Goerz lens. Copies of this portrait, size 8 x 10, printed on Aristo Platino paper and tastefully mounted, can be had by members of the craft of Mr. Rockwood, No. 537 Fifth Ave., New York, at $1.00 each.

MR. MOCK'S SECRET

AMONG the men who grace the photographic profession on account of their artistic ability, business success and high moral character is J. E. Mock, of Rochester, N. Y. Through his rollicking good nature he has won the sobriquet of "Smiling Jim." His portraits are notable for their strength and conviction, and reflect the personality of the artist. They have also attracted attention by their superb technical qualities, his sepia prints, especially, possessing a delightful and mysterious brilliancy and a rich depth in the shadows without any perceptible gloss, which have caused much speculation among all who have noticed it. Mr. Mock himself has divulged the secret. He applies a special varnish of his own make, and which he offers to his fellow-workers. The price is $1.00 a bottle, and it is good for about six hundred 5 x 7 prints. His ad. in this issue tells the rest.

ANSCO FILM-PLANT TO MOVE

THE people of Binghamton are justly pleased to know that the film-plant of Ansco Company, now located at Jersey City, will shortly be moved to new quarters at Binghamton, where the other products of the concern are manufactured. This will provide employment for additional skilled workmen and will be the means of making another great photographic center in New York State. Centralization will probably prove beneficial to Ansco Company as well, so that it seems to be a good move in every way. The growth of this concern has been phenomenal, especially in view of the recent financial depression.